

N09-079



United States
Department of
Agriculture

Forest Service

Southern Forest
Experiment Station

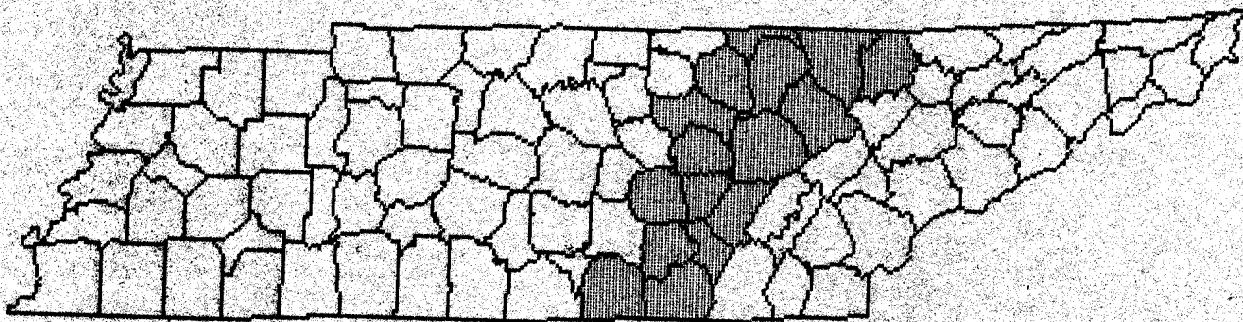
New Orleans,
Louisiana

Resource Bulletin
SO-146



Forest Statistics for Tennessee's Plateau Counties – 1989

Dennis M. May and John S. Vissage



SUMMARY

The 1989 survey of the Plateau Unit of Tennessee revealed the following:

- Timberland now covers **3,064.8** thousand acres, an increase of 3 percent since 1980.
- Three-quarters of the unit's timberland is occupied by oak/hickory forest types.
- Pine plantations cover 137.7 thousand acres, **almost 5** percent of the unit's timberland.
- Eighty-nine percent of the unit's timberland is privately owned.
- Forest industry ownership of timberland fell **20** percent, as did farmer ownership.
- Area in sawtimber-sized stands increased and now comprises 51 percent of all timberland.

- The number of hardwood growing-stock trees fell 32 percent, while softwood numbers increased 12 percent.
- Hardwood growing-stock volume climbed 33 percent to **3,167.4** million cubic feet and softwood growing-stock volume climbed 36 percent of 831.4 million **cubic** feet.
- Net growth increased for both growing stock and sawtimber, despite a general doubling in mortality.
- Removals decreased for growing stock, but increased for sawtimber.
- Growth exceeds removals by roughly 3 to 1.
- Hardwood grade 1 volume decreased 28 percent since **1980**.

FOREWORD

The Southern Forest Survey, an activity of the Southern Forest Experiment Station Forest Inventory and Analysis work unit, covers the States of Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas, and the island of Puerto Rico.

This survey is part of the nationwide Forest Survey originally authorized by the **McSweeney-McNary** Act of 1928. More recent legislation pertinent to the survey mission includes the Forest and Rangeland Renewable Resources Planning Act of 1974 and the Forest and Rangeland Renewable Resources Research Act of 1978. The survey mission is to develop, analyze, and maintain renewable forest resource information. This information is essential for formulation of forest policies and programs.

CONTENTS

INTRODUCTION	1
HIGHLIGHTS	2
Area	2
Timber Inventory	3
Growth, Removals, and Mortality	3
DEFINITION OF TERMS	3
CORE TABLES 1-25*	5
SUPPLEMENTAL TABLES 26-40.	18
GRAPHICS	31

*Core tables are presented in response to the Southern Industrial Forestry Research Council's recommendations. These tables are identical among Forest Inventory and Analysis units in the &stem United States.

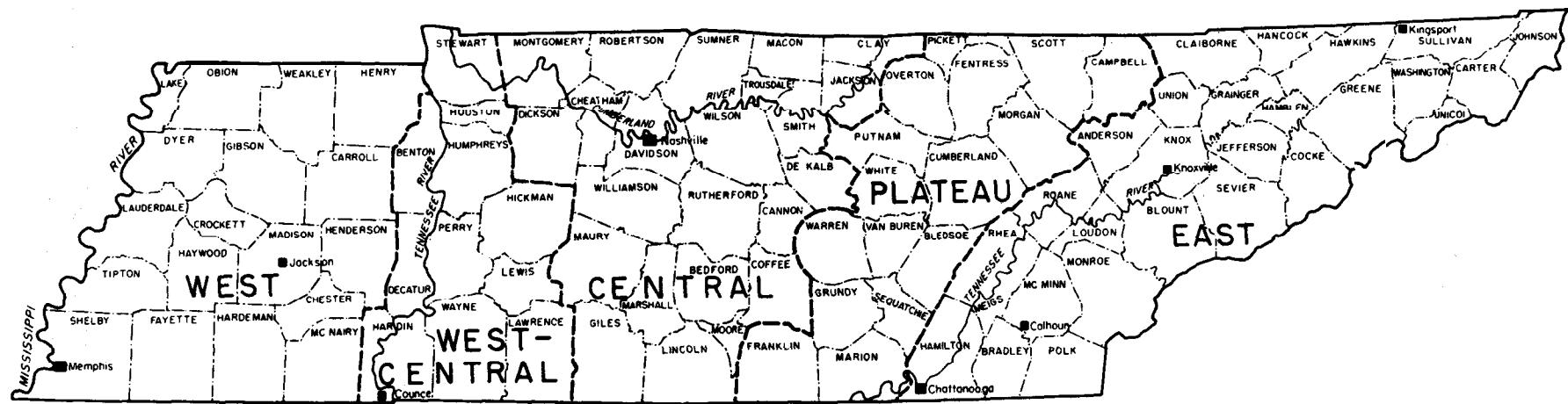


Figure I.-The forest survey regions of Tennessee.

Forest Statistics for Tennessee% Plateau Counties – 1989

Dennis M. May and John S. Vissage

INTRODUCTION

Tabulated results were derived from data obtained during a recent inventory of 16 counties comprising the Plateau Unit of Tennessee (fig. I). Tables 1-25 were developed to provide compatibility among Forest Inventory and Analysis Projects. Tables 26-40 are supplementary tables and may change from unit to unit or State to State to address specific resource issues.

Data on forest acreage and timber volume were secured by a three-step process. A forest-nonforest classification using aerial photographs was accomplished for points representing approximately 230 acres. These photo classifications were adjusted based on ground observations at sample locations representing approximately 3,840 acres. Finally, field measurements were made at forest locations on the intersections of grid lines spaced 3 miles apart. At these forest locations, per acre estimates were obtained from trees measured on ten 37.5 basal area factor prism points.

The sampling methods were designed to achieve suitable sampling errors for estimates of area and volume at the State level. Sampling error increases as the area or volume considered decreases. The sampling errors presented in table I, equal to one standard deviation for the sample data, may be used to construct confidence intervals for population

estimates. For example, at the 95 percent confidence level, the confidence interval for growing-stock volume (in million cubic feet) in the Plateau Unit of Tennessee (with a sampling error or 3.4 percent) is

$$3,998.8 \pm 1.96(0.034 \times 3,998.8) = \\ 3,998.8 \pm 266.5$$

where 1.96 is the number of standard deviations. This confidence interval indicates a 95-percent degree of confidence that the range, 3,732.3 to 4,265.3 million cubic feet, will contain the true growing-stock inventory volume.

Sampling errors for sub-groups of counties in the unit may be estimated by the following formula:

$$SE_g = \frac{SE_t \sqrt{X_t}}{\sqrt{X_g}}$$

where:

SE = standard error of estimate
(expressed as a percent)

X = variable of interest
(area or volume)

g = group of counties to be combined

t = total for the Unit.

Table I-Sampling errors¹ for timberland, growing stock, and sawtimber, Plateau Counties, Tennessee, 1989

County	Timberland	Volume	Growing stock		Sawtimber volume
			Growth	Removals	
<i>Percent</i>					
Bledsoe	3.3	14.2	12.6	29.7	20.3
Campbell	2.2	9.2	11.7	36.1	10.4
Cumberland	1.3	9.6	9.5	20.4	12.3
Fentress	2.4	11.3	13.2	25.4	14.5
Franklin	1.8	12.3	20.7	25.0	17.3
Grundy	2.7	17.9	12.5	22.6	21.9
Marion	2.0	11.0	13.5	21.2	13.7
Morgan	1.8	13.3	8.5	23.3	15.4
Overton	2.6	9.0	12.0	47.2	10.7
Pickett	4.5	28.8	31.2	(2)	38.2
Putnam	3.0	19.9	12.6	27.6	25.8
Scott	2.3	7.0	12.6	21.2	9.1
Sequatchie	2.6	21.3	19.9	37.4	31.5
Van Buren	3.8	18.7	13.1	31.4	23.8
Warren	2.7	16.6	14.5	24.5	18.9
White	2.6	17.5	10.4	26.4	22.5
All counties	0.6	3.4	3.6	7.1	4.3

¹By random-sampling formula.

²Sampling error greater than 50.

For example, the sampling error estimate of growing-stock volume for Overton, Putnam, and White counties is 8.2 percent. Thus, the 95 percent confidence interval for growing-stock volume is 692.3 ± 111.3 million cubic feet.

Ownership information is obtained through the 3-mile grid sample outlined above. County courthouse records are used to obtain ownership information for each forested plot. An expansion factor representing timberland area in that county is then applied to the ownership group the plot represents. Next, the ownership groups are totaled for each county. Thus, acreages reported at the county level are estimates and may not exactly match known totals for each ownership category within that county.

In order to achieve greater compatibility among Forest Inventory and Analysis Projects, a new tree classification system has been in effect since the 1988 Arkansas survey. Tree grade 5 is used to designate trees currently or prospectively capable of producing at least one **12-foot** log or two **8-foot** logs in the saw-log portion but not able to produce a 12-foot log in the butt 16 feet. These trees, formerly classed as rough or rotten, are now included in growing stock. Table II shows the impact of this change on volume and growth.

HIGHLIGHTS

Area

The Plateau Unit of Tennessee encompasses the counties from the Cumberland Plateau westward to the Highland Rim forming the eastern border of the Central Basin. The soils of the unit have been characterized as poor and unsuitable for agriculture. As a consequence, the unit has been the State's most densely forested unit. This distinction has been enhanced by a reversal of a long-time trend of declining timberland. Climbing 3 percent since 1980, timberland now

covers **3,064.8** thousand acres, a full 70 percent of the unit's land area.

With three-quarters of the unit's timberland occupied by oak-hickory forest types alone, the unit remains predominantly hardwood. However, since 1980 the areas in hardwood types and mixed (oak-pine) types have remained relatively stable, while softwood types jumped by a third, adding 91 thousand acres. More than half of this increase occurred as pine plantations. Since 1980, approximately 50 thousand acres have been planted, bringing the total area occupied by plantations to 137.7 thousand acres.

Most of the timberland in the unit is privately held with only 11 percent in public ownership. Since 1980, significant shifts in ownership patterns have taken place. The Plateau Unit has held one the highest concentrations of forest industry land in the State. Although still true, close to 100 thousand acres of timberland have fallen from forest industry control since 1980. This amount is one-fifth of its previous holdings. Interestingly, much of this loss was concentrated in hardwood and mixed types, while industry ownership of pine types increased by 50 percent since 1980. Farmers also lost more than 100 thousand acres of timberland since 1980. The large losses by forest industry and farmers inevitably resulted in gains for other ownership groups. In the private sector, the corporate and individual ownership groups both gained over 100 thousand acres of timberland each and, in the public sector, miscellaneous federal ownership increased 52 percent.

In addition to increasing in area, the unit's timberlands have been maturing. Since 1980, the area of sawtimber-sized stands increased by over 300 thousand acres, while the areas in pole- and sapling-sized stands decreased. Today, **sawtimber-sized** stands occupy 51 percent of all timberland, whereas in 1980 they only accounted for 42 percent.

Table II-Changes ***in volume and growth estimates due to inclusion of tree grade 5 in growing-stock inventory, Plateau Counties, Tennessee, 1989***

Tree grade 5			
	Excluded from growing stock	Included in growing stock	Percent change
----- Million cubic feet -----			
Softwood:			
Growing-stock volume	812.6	831.4	2.3
Rough and rotten volume	28.7	9.9	-65.5
Growing-stock growth	29.4	31.4	6.8
Hardwood:			
Growing-stock volume	2962.9	3167.4	6.9
Rough and rotten volume	531.5	327.1	-38.5
Growing-stock growth	99.1	121.3	22.4
----- Million board feet -----			
Softwood:			
Sawtimber volume	2665.1	2724.8	2.2
Sawtimber growth	96.7	103.2	6.7
Hardwood:			
Sawtimber volume	9406.4	10157.7	8.0
Sawtimber growth	405.7	487.2	20.1

Timber Inventory

With the maturation of the unit's timberland, a shift towards fewer and larger trees of greater volume would be expected. Such is the case with the hardwood growing-stock portion of the inventory, which experienced a 32-percent reduction in numbers and a **33-percent** increase in volume to **3,167.4** million cubic feet. The reduction in numbers was concentrated in size classes smaller than 8 inches and generally occurred across all species, except for **yellow-poplar** which increased across all size classes. The volume increment occurred across all species and size classes.

Individual softwood species, such as shortleaf and Virginia pine, experienced similar trends of decreasing numbers and increasing volumes. However, on the whole, softwood numbers increased, climbing 12 percent due to an influx of smaller white pines, hemlocks, cedars, and planted loblolly pines. At the same time, softwood volume also increased, rising 36 percent to 831.4 million cubic feet. The volume increment generally occurred across all species and size classes.

The maturing nature of the unit's timberland is especially evident in the sawtimber portion of the inventory, which experienced increases in both numbers and volumes of trees since 1980. The number of sawtimber trees climbed 31 percent for both softwood and hardwood and volume increased 36 percent to **2,724.8** million board feet for softwood and 41 percent to **10,157.7** million board feet for hardwood.

In a unit where 79 percent of the sawtimber volume is hardwood, the quality associated with the sawtimber volume is of special concern. In spite of the large increase in hardwood sawtimber inventory, grade 1 volume fell 28 percent since 1980. Although this decline generally occurred across all species, much of the loss, 81 percent, was associated with the oaks and hickories. These two species also account for the majority of hardwood removals, indicating a tendency towards high-grading during harvest. **Yellow-poplar** was the major exception to this general decline in grade 1 hardwood volume with a 19-percent gain over the period. Counteracting the reduction in hardwood quality was a gain in softwood volume across all grades, including an 18 percent increase in grade 1 softwood volume since 1980.

Growth, Removals, and Mortality

The increasing inventory of the unit is a consequence of a favorable growth-to-drain situation since 1980. On an annual basis, net growth for the unit averaged 152.7 million cubic feet for growing stock and 590.4 million board feet for sawtimber. These growth figures reflect the physical change in the inventory over the survey period as well as a **growing-stock definition** change initiated since the 1980 survey. As a result, these growth estimates are not directly comparable to past growth estimates. Using comparable growth estimates that exclude the definition change (table II), net growth increased 23 percent for growing stock and 40 percent for sawtimber. The large increase in sawtimber growth is a reflection of the unit's maturing forest. These increases were in spite of a general doubling in mortality **since 1980**, which reduced net growth by 20 percent for growing-stock and 15 percent for sawtimber. In softwoods, the mortality was almost exclusively concentrated in yellow pines. Oaks

and hickories comprised two-thirds of the hardwood mortality. Disease was by far the leading cause of mortality in both species groups.

Removals, the last element of drain on the inventory, were concentrated in sawtimber-sized trees as evidenced by the **3-percent** reduction in growing-stock removals and **24-percent** rise in sawtimber removals. On an average annual basis, growing-stock removals only reached 48.6 million cubic feet, while sawtimber removals climbed to 193.2 million board feet. All of the rise in sawtimber removals was due to increased hardwood removals over the period; softwood removals actually declined 13 percent. Softwood removals were almost exclusively in yellow pine. Hardwood removals were concentrated in the oaks and hickories, although removals of soft hardwood species also jumped appreciably over the period. These generally reduced removals resulted in growth exceeding removals by roughly 3 to 1 for both growing-stock and sawtimber portions of the inventory.

The unit's timberlands are generally in a desirable condition. The increasing timberland base is supporting a maturing forest that's increasing in volume and growing at three times the rate of depletion. Only a drop in hardwood quality impairs the current status of the unit's timberlands.

DEFINITION OF TERMS

Average net annual growth. -Average net annual volume increase for the inter-survey period.

Average annual mortality. -Average annual sound-wood volume of growing-stock trees dying from natural causes.

Average annual removals. -Average net annual volume of growing-stock trees removed from the inventory by harvesting, cultural operations (such as timber-stand improvement), land clearing, or changes in land use.

Commercial species. -Tree species which normally develop into trees suitable for industrial wood products.

Forest land. - Land at least 16.7 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest use.

Forest type. -A classification of forest land based upon the species forming a plurality of live-tree stocking.

Growing-stock trees. -Live trees of commercial species. Rough and rotten trees are excluded.

Growing-stock volume. -The cubic-foot volume of sound wood in growing-stock trees at least 5.0 inches in diameter at breast height, from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs.

Live trees. - Commercial and noncommercial tree species of sapling size or larger.

Natural stands. - Stands with no evidence of artificial regeneration. This includes those established by seed tree regeneration methods.

Noncommercial species. -Tree species of typically small size, poor form, or inferior quality which normally do not develop into trees suitable for industrial wood products.

Planted stands. -Stands with some evidence of planting or direct seeding.

Poletimber trees. -Growing-stock trees at least 5.0 inches in diameter at breast height, but smaller than sawtimber size.

Reserved timberland. -Productive public forest land withdrawn from timber utilization through statute or administrative regulations.

Rotten trees. -Live trees of commercial species that do not contain at least one **12-foot** log or two **8-foot** logs in the saw-log portion, now or prospectively, primarily because of rot.

Rough trees. — Live trees of commercial species that do not contain at least one **12-foot** log or two **8-foot** logs in the saw-log portion, now or prospectively, primarily because of roughness or poor form. Also included are all live trees of noncommercial species.

Saplings. — Growing-stock trees at least 1.0 inches but less than 5.0 inches in diameter at breast height.

Sawtimber trees. -Live trees that contain at least one **12-foot** log or two **8-foot** logs in the saw-log portion, and meet regional specifications for freedom from defect. Softwoods must be at least 9.0 inches in diameter at breast height and hardwoods at least 11.0 inches in diameter at breast height.

Sawtimber volume. -Sound-wood volume of the saw-log portion of growing-stock sawtimber trees in board feet, International **1/4-inch** rule and in cubic feet.

Seedlings. -Growing-stock trees less than 1.0 inches in diameter at breast height and greater than one foot tall for

hardwoods, greater than six inches tall for softwoods, and greater than one-half inch in diameter at ground level for **longleaf pine**.

Select **red oaks.** -A classification of several red oak species composed of: cherrybark, Shumard, and northern red oaks.

Select **white oaks.** -A classification of several white oak species composed of: white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks.

Site class. -A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

Stand-size class. -A classification of forest land based on the diameter class of live trees on the sampled area; that is, sawtimber, poletimber, or sapling and seedling.

Timberland. -Forest land that is producing, or is capable of producing, crops of industrial wood and not withdrawn from timber utilization. Timberland is synonymous with "commercial forest land" in prior reports.

Tree grade. -A classification of the volume of the saw-log portion of sawtimber trees, based on: 1) the log grade of the butt log, or 2) ability to produce at least one **12-foot** or two **8-foot** logs in the upper-section of the saw-log portion.

Woodland. -Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

CORE TABLES 1-25

Table 1-Area by county and land class, Plateau Counties, Tennessee, 1989

County	All land ¹	Forest land				Nonforest land
		Total	Timberland ²	Woodland ³	Reserved timberland	
<i>Thousand acres</i>						
Bledsoe	260.7	186.3	186.3	...	...	74.4
Campbell	306.6	250.3	250.2	...	0.1	56.2
Cumberland	436.7	320.3	320.3	...	...	116.3
Fentress	318.7	244.1	244.1	...	0.1	74.6
Franklin	347.5	183.4	183.0	...	0.4	164.1
Grundy	231.2	174.5	165.9	...	8.6	56.7
Marion	328.0	251.7	251.7	...	...	76.2
Morgan	334.5	287.8	276.2	...	11.6	46.7
Overton	277.2	170.4	170.4	...	...	106.8
Pickett	102.0	68.4	68.4	...	...	33.6
Putnam	255.5	152.5	152.3	...	0.1	103.0
Scott	338.0	300.3	300.3	...	...	37.7
Sequatchie	169.9	137.3	137.3	...	...	32.6
Van Buren	174.4	145.0	135.4	...	9.6	29.4
Warren	275.6	93.6	93.6	...	...	182.0
White	238.7	129.4	129.4	...	...	109.3
All counties	4394.9	3095.3	3064.8	...	30.5	1299.6

¹From U.S. Bureau of the Census.

²Forest land (formerly termed commercial forest land) that is producing or capable of producing at least 20 cubic feet of industrial wood per acre per year. Includes areas which may be inaccessible or inoperable by current standards. Excludes reserved timberlands.

³Forest land incapable of producing 20 cubic feet of industrial wood per acre per year under natural conditions because of adverse site conditions.

Table 2-Area of timberland by county and ownership class, Plateau Counties, Tennessee, 1989

County	All ownerships	National forest	Misc. federal	State	County and municipal	Forest industry ¹	Farmer	Corporate ²	Individual ²
<i>Thousand acres</i>									
Bledsoe	186.3	...	...	17.5	...	34.9	34.9	34.9	64.0
Campbell	250.2	...	11.6	29.1	5.8	5.8	40.7	110.6	46.6
Cumberland	320.3	...	...	52.4	5.8	46.6	29.1	46.6	139.8
Fentress	244.1	...	5.8	11.6	...	87.2	23.2	40.7	75.5
Franklin	183.0	...	17.2	5.7	...	...	11.4	28.6	120.1
Grundy	165.9	...	5.7	...	...	34.3	11.4	28.6	85.8
Marion	251.7	...	...	18.0	...	30.0	12.0	36.0	155.8
Morgan	276.2	...	5.6	28.2	...	5.6	16.9	50.7	169.1
Overton	170.4	...	6.8	13.6	...	...	61.3	13.6	75.0
Pickett	68.4	...	13.7	6.8	...	...	13.7	6.8	27.4
Putnam	152.3	...	5.4	...	...	...	27.2	38.1	81.6
Scott	300.3	...	49.1	5.5	...	10.9	60.1	92.8	81.9
Sequatchie	137.3	...	...	...	...	22.9	...	5.7	108.7
Van Buren	135.4	...	...	5.4	...	27.1	10.8	65.0	27.1
Warren	93.6	...	...	...	...	...	46.8	15.6	31.2
White	129.4	...	...	...	...	28.1	45.0	5.6	50.6
All counties	3064.8	...	121.0	193.8	11.6	333.4	444.7	620.0	1340.2

¹Includes land leased to forest industry.

²Indian land will be classed as corporate or individual as defined by the Bureau of Indian Affairs.

Table 3—Area of timberland by county and forest type group, Plateau Counties, Tennessee, 1989

County	Total	White-red jack pine	Forest type group				
			Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress
			Planted	Natural			
<i>Thousand acres</i>							
Bledsoe	186.3	...	23.3	17.5	29.1	116.4	...
Campbell	250.2	...	5.8	17.5	29.1	197.9	...
Cumberland	320.3	5.8	23.3	23.3	58.2	209.7	...
Fentress	244.1	...	11.6	40.7	40.7	151.1	...
Franklin	183.0	...	...	...	11.4	171.6	...
Grundy	165.9	...	...	11.4	5.7	143.0	5.7
Marion	251.7	...	6.0	...	36.0	203.8	6.0
Morgan	276.2	...	5.6	...	84.5	186.0	...
Overton	170.4	...	...	6.8	13.6	149.9	...
Pickett	68.4	...	...	...	6.8	61.6	...
Putnam	152.3	...	...	10.9	16.3	125.1	...
Scott	300.3	5.5	...	16.4	38.2	240.2	...
Sequatchie	137.3	5.7	11.4	40.0	...	80.1	...
Van Buren	135.4	5.4	10.8	21.7	10.8	86.7	...
Warren	93.6	...	...	...	5.2	83.2	5.2
White	129.4	...	16.9	5.6	5.6	95.7	5.6
All counties	3064.8	22.4	114.8	211.7	391.5	2301.9	16.8
							5.7

¹Timberland with no current stocking.

Table 4—Area of timberland by county and stand-size class, Plateau Counties, Tennessee, 1989

County	All classes	Stand-size class			Nonstocked' area ^a
		Sawtimber	Poletimber	Sapling- seedling	
<i>Thousand acres</i>					
Bledsoe	186.3	46.6	93.1	46.6	...
Campbell	250.2	157.1	64.0	29.1	...
Cumberland	320.3	157.3	110.7	52.4	...
Fentress	244.1	104.6	116.2	23.2	...
Franklin	183.0	85.8	57.2	40.0	...
Grundy	165.9	57.2	57.2	45.8	5.7
Marion	251.7	161.8	47.9	42.0	...
Morgan	276.2	146.6	73.3	56.4	...
Overton	170.4	122.7	34.1	13.6	...
Pickett	68.4	41.1	20.5	6.8	...
Putnam	152.3	76.2	43.5	32.6	...
Scott	300.3	196.6	76.4	27.3	...
Sequatchie	137.3	57.2	51.5	28.6	...
Van Buren	135.4	43.3	43.3	48.8	...
Warren	93.6	46.8	36.4	10.4	...
White	129.4	67.5	50.6	11.3	...
All counties	3064.8	1568.2	976.1	514.9	5.7

¹ Timberland less than 16.7 percent stocked

Table S-Area of timberland by county and site class, Plateau Counties, Tennessee, 1989

County	All classes	Site class (cubic feet/acre/year)				
		>165	120-165	85-120	SO-85	<50
<i>Thousand acres</i>						
Bledsoe	186.3	23.3	5.8	46.6	75.7	34.9
Campbell	250.2	11.6	40.7	98.9	75.7	23.3
Cumberland	320.3	23.3	29.1	93.2	128.1	46.6
Fentress	244.1	5.8	29.1	93.0	98.8	17.4
Franklin	183.0	...	...	28.6	85.8	68.6
Grundy	165.9	5.7	11.4	51.5	45.8	51.5
Marion	251.7	18.0	30.0	36.0	119.9	47.9
Morgan	276.2	...	11.3	78.9	157.8	28.2
Overton	170.4	6.8	13.6	68.1	61.3	20.4
Pickett	68.4	6.8	13.7	13.7	205	13.7
Putnam	152.3	10.9	27.2	38.1	70.7	5.4
Scott	300.3	...	49.1	65.5	152.9	32.8
Sequatchie	137.3	22.9	22.9	28.6	57.2	5.7
Van Buren	135.4	16.3	10.8	48.8	32.5	27.1
Warren	93.6	5.2	5.2	20.8	46.8	15.6
White	129.4	...	...	28.1	90.0	11.3
All counties	3064.8	156.6	300.0	838.3	1319.5	450.5

Table 6-Area of timberland by county and stocking classes of growing-stock trees, Plateau Counties, Tennessee, 1989

County	All classes	Stocking class (percent)				
		>130	100-130	60-100	16.760	<16.7
<i>Thousand acres</i>						
Bledsoe	186.3	...	52.4	116.4	17.5	...
Campbell	250.2	...	29.1	174.6	46.6	...
Cumberland	320.3	...	87.4	209.7	23.3	...
Fentress	244.1	5.8	52.3	168.5	17.4	...
Franklin	183.0	...	...	125.8	57.2	...
Grundy	165.9	...	22.9	91.5	45.8	5.7
Marion	251.7	...	...	179.8	65.9	6.0
Morgan	276.2	...	45.1	197.3	28.2	5.6
Overton	170.4	...	13.6	143.1	13.6	...
Pickett	68.4	...	6.8	61.6	...	...
Putnam	152.3	...	27.2	81.6	43.5	...
Scott	300.3	5.5	81.9	185.6	27.3	...
Sequatchie	137.3	11.4	17.2	108.7	...	...
Van Buren	135.4	...	37.9	92.1	5.4	...
Warren	93.6	...	5.2	52.0	36.4	...
White	129.4	5.6	28.1	84.4	11.3	...
All counties	3064.8	28.3	507.1	2072.7	439.3	17.3

Table 7-Area of timberland by forest type and ownership class, Plateau Counties, Tennessee, 1989

Forest type ¹	All ownerships	National forest	Other public	Forest industry	Forest industry- leased ¹	Other private
<i>----- Thousand acres -----</i>						
White-red-jack pine	22.4	...	11.2	...	...	11.2
Loblolly-shortleaf pine	326.5	...	17.5	154.1	...	155.0
Softwood total	349.0	...	28.7	154.1	...	166.2
Oak-pine	391.5	...	63.8	34.9	...	292.8
Oak-hickory	2301.9	...	234.0	132.8	6.0	1929.1
Oak-gum-cypress	16.8	...	...	...	...	16.8
Hardwood total	2710.1	...	297.8	167.7	6.0	2238.7
Nontyped²	5.7	...	...	5.7	...	...
All types	3064.8	...	326.5	327.5	6.0	2404.9

¹Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood types.

² Timberland with no current stocking.

Table 8-Area of timberland by ownership and stocking classes of growing-stock trees, Plateau Counties, Tennessee, 1989

Ownership class	All classes	Stocking class (percent)				
		>130	100-130	60-100	16.760	<16.7
<i>----- Thousand acres -----</i>						
Other public	326.5	...	70.1	222.2	34.2	...
Forest industry	327.5	17.2	125.1	173.5	6.0	5.7
Forest industry-leased	6.0	...	...	6.0	...	...
Other private	2404.9	11.2	311.9	1671.0	399.2	11.6
All ownerships	3064.8	28.3	507.1	2072.7	439.3	17.3

Table 9—Area of timberland by forest type and stand-size class, Plateau Counties, Tennessee, 1989

Forest type ¹	Stand-sire class				Nonstocked ² areas
	All classes	Sawtimber	Poletimber	Sapling-seedling	
<i>Thousand acres</i>					
White-red-jack pine	22.4	22.4	...	...	...
Loblolly-shortleaf pine	326.5	104.5	136.7	85.3	...
Softwood total	349.0	126.9	136.7	85.3	...
Oak-pine	3915	178.3	136.6	76.6	...
Oak-hickory	2301.9	1251.8	697.3	353.0	...
Oak-gum-cypress	16.8	11.2	5.6	...	...
Hardwood total	2710.1	1441.3	839.3	429.5	...
Nontyped³	5.7	...	...	...	5.7
All types	3064.8	1568.2	976.1	514.9	5.7

¹Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood types.

²Timberland less than 16.7 percent stocked.

³Timberland with no current stocking.

Table 10—Number of live trees on timberland by species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>Thousand trees</i>													
Shortleaf-loblolly pine	73188	9875	19963	20284	12690	5718	3097	1089	267	112	55	39	...
Other yellow pines	101102	38946	20444	16023	11894	6341	4333	2174	633	223	69	24	...
Eastern white-red pine	24103	15979	4186	827	1015	607	510	368	216	115	127	134	19
Eastern hemlock	22624	13838	4346	1904	555	528	401	406	231	234	67	11.5	...
Other softwoods	20421	10396	5051	3026	741	83.5	254	10.5	13	...	...	...	...
Total softwoods	241438	89033	53989	42064	26894	14029	8595	4140	1360	684	318	312	19
Select white oaks	197761	84661	56666	23342	11501	8530	5115	3533	2029	1259	617	494	14
Select red oaks	14542	4233	2052	1724	1721	1268	916	836	697	402	366	299	27
Other white oaks	74726	22756	14852	10359	9044	6185	4722	3050	1766	877	507	497	110
Other red oaks	100946	32810	22469	15446	10063	6103	5209	3644	2490	1400	732	574	7
Hickory	130926	70105	27762	9104	8686	6583	4189	2222	1159	601	281	212	21
Yellow birch	2717	1632	627	406	...	35	16	...	...	...	...	...	...
Hard maple	81126	46678	20194	5075	3750	2267	1390	652	461	241	199	176	42
Soft maple	316128	235939	47286	14899	8415	3726	2647	1366	866	509	275	202	...
Beech	17672	11437	1546	1289	967	678	401	254	188	307	122	410	72
Sweetgum	13178	5917	3091	1786	1156	543	333	160	122	12	31	25	3
Tupelo-blackgum	108878	80225	19645	3794	1925	1176	634	621	459	193	124	73	9
Ash	34203	18181	7197	4324	1624	1219	661	461	273	113	49	101	...
Basswood	9406	7494	...	222	579	360	281	80	189	126	52	22	...
Yellow-poplar	75363	35329	10969	7525	5956	4941	3646	2969	1685	1190	609	496	47
Black walnut	774	...	...	...	239	127	193	161	14	28	...	8	4
Other hardwoods	389158	299138	66119	12156	5484	2797	1500	914	487	266	194	103	...
Total hardwoods	1567503	956533	300474	111452	71110	46538	31838	20939	12885	7524	4159	3692	358
Noncommercial	244985	167857	56097	16015	3321	1088	404	147	30	13	12	...	...
All species	2053926	1213424	410561	169531	101325	61654	40837	25226	14275	8221	4490	4004	377

Table 11-Number of growing-stock trees on timberland by species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)											
		LO-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>Thousand trees</i>													
Shortleaf-loblolly pine	71334	8807	19429	20284	12485	5671	3097	1089	267	112	55	39	...
Other yellow pines	93758	35267	17244	16023	11688	6217	4304	2132	616	175	69	24	...
Eastern white-red pine	22041	14461	3669	827	101.5	607	483	368	216	115	127	134	19
Eastern hemlock	21886	13313	4346	1784	555	482	375	406	214	234	67	110	...
Other softwoods	15315	7138	3993	2497	741	621	226	86	13	...	...	...	...
Total softwoods	224335	78986	48681	41415	26483	13598	8485	4080	1326	635	318	307	19
Select white oaks	152612	55043	45775	20626	11169	8158	4664	3315	1901	1075	508	375	5
Select red oaks	13366	3708	2052	1516	1589	1114	883	793	680	402	347	257	25
Other white oaks	57408	11125	13260	9488	8483	5601	4075	2473	1480	697	365	331	30
Other red oaks	82198	22328	17739	14560	9382	5745	4654	3272	2227	1209	624	457	...
Hickory	89882	36749	22453	8086	8093	6432	3902	2060	1095	525	271	195	21
Yellow birch	2061	1099	627	319	...	...	...	16	...	...	...	...	...
Hard maple	56100	27049	16991	3914	3261	2132	12.59	542	429	229	199	92	4
Soft maple	181089	117035	37796	12141	7061	2820	2010	1084	516	340	174	113	...
Beech	105%	5658	1546	788	804	540	248	216	156	243	94	266	35
Sweetgum	7879	2033	2075	1606	1096	432	307	160	109	12	31	17	3
Tupelo-blackgum	48898	28769	12700	3277	1726	878	525	458	350	143	31	37	4
Ash	17546	6503	3580	3647	1395	1146	472	366	258	87	38	54	...
Basswood	2639	1066	...	84	579	292	281	80	173	37	32	15	...
Yellow-poplar	63443	24364	10969	7001	5883	4777	3564	2949	1665	1166	599	481	25
Black walnut	733	...	...	...	239	127	169	143	14	28	8	4	...
Other hardwoods	176541	127833	31945	7656	4186	2214	1145	798	373	189	122	78	...
Total hardwoods	962990	470362	219508	94709	64946	42407	28158	18725	11426	6381	3435	2776	157
All species	1187325	549349	268189	136124	91429	56005	36643	22805	12752	7016	3753	3083	176

Table 12-Volume of growing stock on timberland by species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)											
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger		
<i>Million cubic feet</i>													
Shortleaf-loblolly pine	286.9	40.9	71.7	67.0	56.8	30.1	9.8	5.4	3.0	2.3	.	.	.
Other yellow pines	393.0	53.2	85.0	79.5	81.6	57.5	22.8	7.6	4.4	1.4	...	...	...
Eastern white-red pine	72.0	2.0	6.3	7.4	9.0	9.3	7.2	5.7	7.8	13.6	3.7	...	...
Eastern hemlock	58.7	3.9	2.8	5.0	7.1	10.0	7.5	9.7	4.0	8.6	...	...	...
Other softwoods	20.8	6.1	4.1	5.7	3.2	1.5	0.2	.	.	.	.	.	.
Total softwoods	831.4	106.1	170.0	164.7	157.7	108.3	47.5	28.4	19.1	25.9	3.7	...	...
Select white oaks	545.4	56.9	70.0	93.3	85.3	81.2	64.5	45.1	25.7	22.6	0.6	...	...
Select red oaks	148.7	5.0	10.1	12.6	15.4	20.8	23.2	17.7	19.7	20.6	3.6	...	...
Other white oaks	361.7	25.3	46.0	57.2	66.3	54.5	45.6	27.5	17.1	20.0	2.1	...	...
Other red oaks	478.5	36.7	53.6	58.2	73.9	75.1	69.2	49.7	31.9	30.0	...	...	...
Hickory	376.9	21.9	46.5	73.4	76.4	54.5	41.5	26.4	16.4	17.0	3.1	...	...
Yellow birch	1.0	0.6	...	...	0.4	...	...	...	...	**	...	...	...
Hard maple	148.2	11.1	22.7	26.9	23.5	15.6	16.1	12.1	11.8	7.9	0.6	...	...
Soft maple	210.6	34.6	42.2	32.3	32.8	23.9	15.6	12.8	9.4	6.9	...	...	...
Beech	70.3	2.5	5.6	6.2	3.6	5.6	4.9	10.0	4.4	23.2	4.2	...	...
Sweetgum	31.2	2.9	5.4	5.2	5.8	3.4	4.2	0.6	1.7	1.2	0.6	...	...
Tupelo-blackgum	56.7	6.6	8.8	7.7	7.0	9.0	8.8	4.6	1.6	2.2	0.3	...	...
Ash	69.2	9.0	8.3	13.2	9.1	9.3	9.0	4.6	2.2	4.6	...	...	...
Basswood	30.6	0.4	4.9	4.4	6.7	2.5	6.6	2.1	1.6	1.4	...	...	...
Yellow-poplar	488.6	21.8	40.5	57.8	71.7	87.2	67.0	59.8	36.3	42.9	3.6	...	...
Black walnut	11.9	...	1.4	1.3	2.7	3.9	0.5	1.1	...	0.5	0.5	...	...
Other hardwoods	137.9	17.8	24.0	23.6	18.8	21.2	12.4	7.5	7.7	4.9	...	...	...
Total hardwoods	3167.4	253.2	390.1	473.4	499.0	468.3	389.0	281.5	187.6	206.0	19.3	...	...
All species	3998.8	359.3	560.1	638.1	656.7	576.6	436.5	309.9	206.7	231.9	23.0	...	...

Table 13—Volume of growing stock in the saw-log portion of sawtimber¹ trees on timberland by species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)							
		9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
<i>----- Million cubic feet -----</i>									
Shortleaf-loblolly pine	148.5	53.3	50.0	27.0	8.8	4.7	2.7	2.1	...
Other yellow pines	214.3	63.4	68.8	50.5	20.0	6.6	3.8	1.2	...
Eastern white-red pine	55.5	5.9	7.9	8.2	6.6	4.9	6.6	11.7	3.7
Eastern hemlock	46.2	4.0	6.1	a.7	6.7	9.1	3.7	7.9	...
Other softwoods	8.9	4.6	2.8	1.3	0.2	...	...	...	...
Total softwoods	473.4	131.1	135.6	95.7	42.2	25.3	16.8	22.9	3.7
Select white oaks	264.8	...	64.3	66.8	53.9	38.5	22.0	18.7	0.5
Select red oaks	101.1	...	11.7	17.0	19.3	15.1	17.0	17.7	3.4
Other white oaks	188.8	...	50.6	44.3	38.2	23.4	13.8	16.7	1.7
Other red oaks	274.1	...	56.7	62.5	59.2	42.7	27.3	25.8	...
Hickory	1935	...	58.2	45.9	35.5	22.7	13.9	14.3	3.0
Mallow	69.9	...	17.0	10.2	13.1	10.0	10.0	6.7	0.5
Soft maple	79.1	...	23.3	18.3	13.0	10.8	8.2	5.5	...
Beech	45.3	...	2.5	4.4	3.8	85	3.8	18.9	3.3
Sweetgum	13.5	...	3.8	2.6	3.6	0.6	1.5	1.1	0.4
Tupelo-blackgum	28.6	...	55	7.6	7.8	4.1	1.5	2.0	0.3
Ash	30.9	...	6.6	7.2	7.2	4.1	1.8	3.9	...
Basswood	17.3	...	5.3	2.0	55	1.7	1.5	1.3	...
Yellow-poplar	312.3	...	52.0	72.4	59.4	53.7	32.6	38.9	3.3
Black walnut	6.7	...	1.7	3.2	0.3	0.8	...	0.3	0.5
Other hardwoods	57.3	...	13.4	16.9	9.8	6.3	6.6	4.3	...
Total hardwoods	1683.4	...	372.6	384.0	3295	242.9	1615	176.0	16.9
All species	2156.8	131.1	508.2	479.7	371.7	268.2	178.3	198.9	20.6

¹That part of the bole of sawtimber trees between a 1-foot stump and saw-log top.

Table 14—Volume of sawtimber on timberland by species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)							
		9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
<i>----- Million board feet -----</i>									
Shortleaf-loblolly pine	856.8	287.4	288.8	166.1	54.9	31.2	16.5	11.8	...
Other yellow pines	1233.0	340.7	390.9	384.8	125.3	39.6	24.5	7.2	...
Eastern white-red pine	334.0	31.1	44.1	46.0	37.5	32.0	40.5	76.8	25.9
Eastern hemlock	257.9	19.9	33.5	48.9	39.7	49.6	21.8	44.6	...
Other softwoods	43.1	22.5	13.6	6.5	0.5	...	...	...	...
Total softwoods	2724.8	701.6	770.8	572.3	257.9	152.5	103.3	140.5	25.9
Select white oaks	1581.6	...	355.8	386.9	331.2	243.8	142.1	118.6	3.3
Select red oaks	626.2	...	66.5	101.2	117.0	95.3	108.6	114.4	23.3
Other white oaks	1119.1	...	284.7	258.4	229.7	144.6	87.9	103.3	10.4
Other red oaks	1632.8	...	310.6	360.5	356.4	265.6	172.8	166.9	...
Hickory	1193.9	...	336.9	278.4	223.9	146.9	91.2	95.6	21.1
Yellow birch	1.1	...	...	1.1	...	...	...	...	...
Hard maple	440.5	...	99.2	80.8	81.7	64.9	64.2	46.7	3.1
Soft maple	459.9	...	1265	105.7	79.6	64.4	50.4	33.3	...
Beech	284.9	...	13.4	26.4	23.3	52.7	24.4	123.3	21.2
Sweetgum	77.1	...	21.0	13.7	21.3	3.4	8.8	6.0	2.7
Tupelo-blackgum	163.7	...	28.1	42.4	46.0	23.7	8.8	13.3	1.4
Ash	193.7	...	41.4	42.4	45.9	26.5	11.9	25.5	...
Basswood	106.4	...	32.9	12.3	33.4	11.3	8.4	8.0	...
Yellow-poplar	1892.3	...	301.9	434.3	362.7	333.6	197.8	242.6	19.4
Black walnut	41.5	...	9.2	20.5	1.6	4.9	...	2.0	3.3
Other hardwoods	343.1	...	75.0	102.7	58.7	39.6	41.9	25.3	...
Total hardwoods	10157.7	...	2103.1	2267.7	2012.5	1521.3	1019.2	1124.8	109.3
All species	12882.5	701.6	2873.9	2840.0	2270.3	1673.7	1122.5	1265.3	135.2

Table 15—Volume of growing stock and sawtimber on timberland by county and species group, Plateau Counties, Tennessee, 1989

County	All species	Growing stock					Sawtimber					
		softwood			Hardwood		softwood			Hardwood		
		Pine			Soft ¹	Hard ²	Pine			Soft ¹	Hard ²	
	All species	Planted	Natural	Other			All species	Planted	Natural	Other		
<i>----- Million cubic feet -----</i>												
Bledsoe	187.5	26.6	40.8	2.6	22.7	94.8	457.6	43.2	126.5	10.7	51.6	225.6
Campbell	354.0		50.6	5.7	97.1	200.6	1335.9	...	172.5	19.7	344.0	799.5
Cumberland	418.3	9.5	109.5	4.1	64.2	231.0	1276.9	2.0	422.3	13.4	160.9	678.2
Fentress	3635	10.5	102.6	15.3	65.2	170.0	1057.7	13.8	327.9	61.5	177.3	477.2
Franklin	175.7			4.4	16.5	154.8	574.5	...	...	6.3	64.9	503.2
Grundy	194.4	...	29.6	2.2	40.0	122.5	519.2	...	64.9	6.1	117.4	330.8
Marion	265.4	0.9	33.1	7.1	so.1	174.2	846.9	...	117.3	34.1	150.6	544.9
Morgan	368.7	1.2	86.3	2.0	94.9	184.4	1323.0	...	342.1	8.4	318.9	653.6
Overton	291.3	...	28.6	2.9	123.8	136.0	1072.8	...	140.7	4.6	451.7	475.8
Pickett	92.9		1.7	5.3	31.3	54.6	295.2	...	5.2	18.1	112.2	159.6
Putnam	202.7	...	14.5	4.4	69.4	114.5	788.7	...	62.4	12.6	263.4	370.4
Scott	490.1	16.9	82.4	7.8	98.5	284.6	1565.4	64.3	298.4	34.2	266.3	902.3
Sequatchie	134.4	2.1	45.7	6.2	20.9	59.4	371.9	1.5	129.8	28.9	52.7	159.0
Van Buren	149.7	2.7	31.7	7.8	37.4	70.0	441.1	2.0	56.0	39.9	125.4	217.9
Warren	111.6	...			27.1	845	3705	...	...	109.2	261.2	
White	198.3	21.4	3.1	1.5	62.9	109.4	665.3	20.0	10.8	2.7	222.4	409.4
All counties	3998.8	91.7	660.2	795	922.1	224s.2	128825	146.8	2276.9	301.1	2989.2	7168.5

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²**Hardwood** species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 16—Volume of timber on timberland by class of timber and species group, Plateau Counties, Tennessee, 1989

Class of timber	All species	softwood			Hardwood	
		Pine			Soft ¹	Hard ²
		Planted	Natural	Other		
<i>Million cubic feet</i>						
Sawtimber trees:						
Saw-log portion	2156.8	28.1	390.1	55.1	499.0	1184.4
Upper-stem portion	449.2	55	69.0	7.4	104.0	263.2
Total	2605.9	33.7	459.2	62.5	603.1	1447.5
Poletimber trees	1392.8	58.1	201.0	17.0	319.1	797.7
All growing-stock trees	3998.8	91.7	660.2	79.5	922.1	2245.2
Rough trees:						
Sawtimber size	109.0	...	3.1	2.6	24.2	79.1
Poletimber size	127.6	...	2.3	0.9	24.5	100.0
Total	236.6	...	5.3	3.5	48.7	179.1
Rotten trees:						
Sawtimber size	92.6	...	0.4	0.5	28.1	63.6
Poletimber size	7.7	...	...	0.1	3.5	4.1
Total	100.3	...	0.4	0.6	31.6	67.7
Salvable dead trees:						
Sawtimber size	16.4	...	8.6	...	...	7.7
Poletimber size	14.5	...	3.1	0.2	...	11.1
Total	30.9	...	11.8	0.2	...	18.8
All classes	4366.6	91.7	677.7	83.9	1002.3	2510.9

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

¹Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 17—Volume of live trees and growing stock on timberland by ownership class and species group, Plateau Counties, Tennessee, 1989

Ownership class	All species	Live trees					Growing stock				
		Softwood			Hardwood		softwood			Hardwood	
		Pine		Other	Soft ¹	Hard ²	Pine		Other	Soft ¹	Hard ²
		Planted	Natural				Planted	Natural			
<i>Million cubic feet</i>											
Other public	529.9	...	113.0	27.4	95.7	293.9	497.5	...	112.2	26.4	87.9
Forest industry	401.1	67.5	92.5	5.9	68.1	167.0	374.1	67.5	91.4	5.5	61.1
Forest industry-leased	13.9	...			2.5	11.4	12.0	...	...	2.5	9.6
Other private	3390.7	24.3	460.4	50.4	836.1	2019.7	3115.1	24.3	456.6	47.5	770.7
All ownerships	4335.7	91.7	665.9	83.7	1002.3	2492.1	3998.8	91.7	660.2	79.5	922.1
											2245.2

*Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

¹Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 18 Average net annual growth of growing stock and sawtimber on timberland by county and species group, Plateau Counties, Tennessee, 1989

County	Growing stock						Sawtimber					
	softwood			Hardwood			Softwood			Hardwood		
	All species	Pine		Soft ¹	Hard ²	All species	Pine		Soft ¹	Hard ²		
<i>Million cubic feet</i>												
Bledsoe	10.6	2.0	1.8	0.1	1.5	5.2	26.0	1.4	6.1	0.4	3.6	14.5
Campbell	10.2	...	0.8	0.2	4.4	4.8	56.9	...	4.6	1.4	20.0	30.8
Cumberland	12.8	0.6	3.2	0.2	2.6	6.2	45.5	0.6	13.4	1.1	8.0	22.4
Fentress	12.9	0.9	3.2	0.7	3.0	5.2	44.2	1.0	10.0	2.0	10.4	20.8
Franklin	4.3	...	...	0.2	0.6	3.5	17.9	...	...	0.8	3.3	13.7
Grundy	8.5	...	1.4	...	1.9	5.2	25.0	...	3.8	0.2	5.0	16.0
Marion	9.6	0.1	1.0	0.2	2.2	6.1	28.2	...	0.5	0.4	5.7	21.7
Morgan	17.9	...	4.6	0.1	4.8	8.4	79.1	...	20.2	0.7	18.2	40.1
Overton	10.3	...	0.8	0.1	4.4	5.0	52.9	...	4.5	0.4	23.9	24.1
Pickett	2.5	...	0.1	0.2	0.9	1.3	7.9	...	0.4	0.6	3.7	3.2
Putnam	10.5	...	...	0.3	4.0	6.1	47.8	...	0.4	1.1	19.3	26.9
Scott	16.9	0.9	1.1	0.2	4.0	10.7	73.4	5.0	8.7	1.2	11.7	46.9
Sequatchie	3.8	0.5	1.6	0.1	0.7	0.9	10.3	1.7	3.9	0.4	2.3	2.0
Van Buren	6.7	0.3	1.5	0.2	2.1	2.6	18.5	0.2	2.7	1.1	6.9	7.6
Warren	4.1	...	...	-0.1	0.9	3.3	17.3	...	...	-0.3	5.2	12.4
White	11.1	2.0	0.1	0.1	3.5	5.4	39.3	2.1	0.3	0.3	12.2	24.4
All counties	152.7	7.3	21.2	2.9	41.3	79.9	590.4	12.1	79.4	11.7	159.5	327.7

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 19 Average net annual removals of growing stock and sawtimber on timberland by county and species group, Plateau Counties, Tennessee, 1989

County	Growing stock						Sawtimber					
	softwood			Hardwood			softwood			Hardwood		
	All species	Pine		Soft ¹	Hard ²	All species	Pine		Soft ¹	Hard ²		
<i>Million cubic feet</i>												
Bledsoe	0.5	...	0.3	...	...	0.2	1.0	...	0.6	...	...	0.4
Campbell	2.5	...	0.2	...	0.7	1.6	10.4	...	0.9	...	3.3	6.2
Cumberland	5.7	0.5	0.9	...	0.7	35	21.2	0.6	4.0	...	2.9	13.6
Fentress	3.4	...	1.6	0.1	0.5	1.2	13.4	...	5.7	0.4	1.3	6.0
Franklin	5.5	...	...	0.2	0.2	5.2	27.0	...	...	0.5	1.4	25.1
Grundy	5.2	...	1.0	...	0.4	3.7	15.7	...	2.3	...	1.6	11.8
Marion	4.0	...	0.6	...	0.4	2.9	15.6	...	...	...	1.5	14.1
Morgan	3.4	...	0.4	...	1.7	1.3	10.7	...	1.7	...	4.5	4.6
Overton	1.5	...	...	...	0.2	1.3	6.4	...	...	...	...	6.4
Pickett	0.2	...	0.2	...	...	...	0.4	...	0.4	...	...	...
Putnam	3.1	...	...	...	1.2	1.9	14.2	...	...	...	6.1	8.2
Scott	5.3	...	2.3	0.1	1.4	1.6	20.4	...	9.2	0.4	5.0	5.8
Sequatchie	0.6	...	0.1	...	...	0.4	1.1	...	...	...	...	1.1
Van Buren	1.9	...	0.4	...	0.4	1.1	8.1	...	0.9	...	1.8	5.4
Warren	2.2	...	...	...	0.6	1.5	9.4	...	...	...	3.5	5.9
White	3.8	...	0.1	...	1.1	2.6	18.1	...	...	...	6.2	11.9
All counties	48.6	0.5	8.1	0.3	9.5	30.2	193.2	0.6	25.6	1.2	39.2	126.5

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 20—Average net annual growth and average annual removals of growing stock on timberland by species, Plateau Counties, Tennessee, 1989

Species	Growth	Removals
----- Million cubic feet -----		
Yellow pines	25.4	8.6
Eastern white-red pines	3.1	0.1
Other softwoods	2.9	0.3
Total softwoods	31.4	8.9
Select white-red oaks	25.8	8.3
Other white-red oaks	29.5	11.9
Hickory	7.5	5.8
Yellow birch	0.1	0.2
Hard maple	8.6	2.3
Sweetgum	1.3	0.3
Ash-walnut-black cherry	4.9	1.3
Yellow-poplar	22.0	5.7
Other hardwoods	21.5	3.9
Total hardwoods	121.3	39.7
All species	152.7	48.6

Table 21—Average net annual growth and average annual removals of sawtimber on timberland by species, Plateau Counties, Tennessee, 1989

Species	Growth	Removals
----- Million board feet -----		
Yellow pines	75.8	25.8
Eastern white-red pines	15.8	0.4
Other softwoods	11.7	1.2
Total softwoods	103.2	27.5
Select white-red oaks	106.4	33.6
Other white-red oaks	120.9	47.0
Hickory	34.7	27.7
Yellow birch	0.1	0.3
Hard maple	32.2	10.5
Sweetgum	4.0	1.1
Ash-walnut-black cherry	17.8	5.6
Yellow-poplar	99.8	26.4
Other hardwoods	71.2	13.3
Total hardwoods	487.2	165.7
All species	599.4	193.2

Table 22-Average annual mortality of growing stock and sawtimber on timberland by species, Plateau Counties, Tennessee, 1989

Species	Growing stock	Sawtimber
----- Million cubic feet ----- Million board feet -----		
Yellow pines	7.2	20.3
Eastern white-red pines	0.6	3.1
Other softwoods	0.3	1.3
Total softwoods	8.2	24.1
Select white-red oaks	3.0	8.2
Other white-red oaks	8.4	21.4
Hickory	4.5	11.0
Hard maple	0.3	0.7
Sweetgum	0.3	1.1
Ash-walnut-black cherry	0.6	1.8
Yellow-poplar	2.1	6.6
Other hardwoods	3.9	10.2
Total hardwoods	23.0	60.9
All species	31.2	85.6

Table 23-Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, Plateau Counties, Tennessee, 1989

Ownership class	Growth						Removals					
	Softwood			Hardwood			Softwood			Hardwood		
	Pine		All species	Planted	Natural	Other	Soft ¹		Hard ²		Pine	
	All	species					Planted	Natural	Other	Soft ¹	Hard ²	
----- Million cubic feet -----												
Other public	12.8	...	1.7	0.8	2.3	7.9	2.7	...	0.1	0.1	1.3	1.3
Forest industry	19.7	6.1	4.6	0.2	3.0	5.8	4.9	0.5	2.5	...	0.1	1.8
Forest industry-leased	0.7	...	...	...	0.2	0.5	0.5	...	...	...	0.1	0.5
Other private	119.5	12	14.9	1.8	35.8	65.6	405	...	5.6	0.2	8.0	26.6
All ownerships	152.7	7.3	21.2	2.9	41.3	79.9	48.6	0.5	8.1	0.3	9.5	30.2

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²**Hardwood** species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 24-Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, Plateau Counties, Tennessee, 1989

Ownership class	Growth						Removals					
	Softwood			Hardwood			Softwood			Hardwood		
	Pine		All species	Planted	Natural	Other	Soft ¹		Hard ²		Pine	
	All	species					Planted	Natural	Other	Soft ¹	Hard ²	
----- Million board feet -----												
Other public	51.9	...	7.5	3.1	8.2	33.2	8.5	...	0.4	0.4	3.5	4.2
Forest industry	46.8	5.6	12.3	1.0	10.3	17.5	14.7	0.6	7.0	0.1	0.5	6.4
Forest industry-leased	3.9	...	...	...	1.0	2.9	2.6	...	...	0.3	0.3	2.4
Other private	487.8	6.5	59.6	7.6	140.0	274.1	167.4	...	18.2	0.7	35.0	113.5
All ownerships	590.4	12.1	79.4	11.7	159.5	327.7	193.2	0.6	25.6	1.2	39.2	126.5

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²**Hardwood** species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 25—Volume of sawtimber on timberland by species and tree grade, Plateau Counties, Tennessee, 1989

Species	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
----- Million board feet -----						
Yellow pines	2089.8	280.4	216.5	1549.8	...	43.0
Redcedar	43.1	41.0	...	...	...	2.1
Other softwoods	591.9	93.2	167.9	309.4	6.7	14.7
Total softwoods	2724.8	414.7	384.5	1859.2	6.7	59.7
Select white-red oaks	2207.8	197.2	474.9	929.7	482.7	123.3
Other white-red oaks	2751.9	191.9	400.4	1152.4	856.9	150.4
Hickory	1193.9	91.6	226.8	603.1	204.8	67.6
Yellow birch	1.1	...	...	1.1	...	...
Hard maple	4405	13.1	76.5	204.7	96.4	49.9
Sweetgum	77.1	3.9	15.7	44.3	5.8	7.3
Tupelo and blackgum	163.7	1.4	28.4	71.9	24.6	375
Ash-walnut-black cherry	304.8	39.0	68.3	141.6	23.5	32.4
Yellow-poplar	1892.3	248.5	359.3	806.3	358.6	119.7
Other hardwoods	1124.7	48.9	108.8	495.0	308.5	163.4
Total hardwoods	10157.7	835.4	1759.0	4450.1	2361.8	751.3
All species	12882.5	1250.1	2143.5	6399.3	2368.5	811.0

Supplemental Tables 26-40

Table 26—Area of timberland by stand age, forest type group and type of regeneration, Plateau Counties, Tennessee, 1989

Stand age class	Pine		Oak-pine		Other hardwood types	
	Artificial	Natural	Artificial	Natural	Artificial	Natural
----- Thousand acres -----						
1-10	45.8	11.2	...	16.8	5 . 8	16.5
11-20	40.5	...	...	...	...	22.7
21-30	28.3	...	...	...	5.8	...
31-40	...	17.5	...	...	...	...
41-50	...	5.8	...	...	...	...
>50	...	...	5.8	...	...	...
Mixed	5.6	194.2	...	368.8	...	2267.9
Total	120.3	228.7	5.8	385.6	11.6	2307.0

Table 27—Volume of softwood growing stock on timberland by forest type, Plateau Counties, Tennessee, 1989

County	Total	White-red-jack pine	Forest type group			
			Loblolly-shortleaf pine		Oak-pine	Oak-hickory
			Planted	Natural		
<i>Million cubic feet</i>						
Bledsoe	70.0	...	19.2	28.3	12.6	9.9
Campbell	56.4	...	...	25.1	21.9	9.3
Cumberland	123.1	8.9	9.5	38.1	36.9	29.7
Fentress	128.4	...	10.5	48.9	35.3	33.7
Franklin	4.4	...	...	...	2.5	1.9
Grundy	31.9	...	...	21.3	2.4	8.1
Marion	41.1	...	0.9	...	18.4	21.8
Morgan	89.5	...	1.2	...	57.1	31.2
Overton	31.5	...	...	15.4	9.5	6.6
Pickett	7.0	...	...	...	...	7.0
Putnam	18.9	...	...	...	12.6	6.2
Scott	107.1	16.9	...	18.4	35.2	36.6
Sequatchie	54.1	6.0	2.1	30.9	...	15.0
Van Buren	42.2	7.8	2.7	18.4	7.4	5.9
Warren	...	...	...	...	...	...
White	26.0	...	21.4	...	3.4	1.2
All counties	831.4	39.7	67.5	245.0	255.3	223.9

Table 28—Volume of hardwood growing stock on timberland by forest type, Plateau Counties, Tennessee, 1989

County	Total	White-red-jack pine	Forest type group			
			Loblolly-shortleaf pine		Oak-pine	Oak-hickory
			Planted	Natural		
<i>Million cubic feet</i>						
Bledsoe	117.6	...	0.8	2.9	14.8	99.1
Campbell	297.6	...	...	5.9	14.9	276.9
Cumberland	295.2	5.0	0.5	5.2	39.7	244.9
Fentress	235.1	...	...	7.5	39.9	187.7
Franklin	171.4	...	...	...	3.0	168.4
Grundy	1625	...	...	4.7	6.3	151.5
Marion	224.3	...	...	...	18.3	202.1
Morgan	279.2	...	...	...	59.5	219.7
Overton	259.9	...	...	2.2	12.7	245.0
Pickett	85.9	...	...	...	...	85.9
Putnam	183.9	...	...	0.3	7.6	176.0
Scott	383.1	4.0	...	6.8	25.0	347.2
Sequatchie	80.3	1.5	...	11.2	...	67.7
Van Buren	107.5	4.9	0.2	2.3	4.3	95.8
Warren	111.6	...	...	...	0.5	103.1
White	172.3	...	1.8	...	4.1	162.4
All counties	3167.4	15.4	3.3	48.9	250.6	2833.2
						16.0

Table 29—*Volume of softwood growing stock in the saw-logportion of sawtimber trees on timberland by forest type, Plateau Counties, Tennessee, 1989*

County	Total	Forest type group			
		Loblolly-shortleaf pine		Oak-pine	Oak hickory
		Planted	Natural		
<i>Million cubic feet</i>					
Bledsoe	33.3	...	2.6	14.9	10.3
Campbell	33.2	...	...	15.0	12.4
Cumberland	74.4	6.4	0.4	22.7	24.7
Fentress	67.9	...	2.9	19.7	23.8
Franklin	1.3	...	...	...	0.6
Grundy	12.1	...	...	7.5	0.7
Marion	27.2	...	...	...	12.4
Morgan	59.3	...	...	...	34.9
Overton	23.3	...	...	13.0	6.0
Pickett	4.1	...	...	...	...
Putnam	13.9	...	...	...	9.2
Scott	68.7	11.5	...	10.4	21.2
Sequatchie	30.1	4.6	0.3	15.4	...
Van Buren	17.8	6.8	0.4	6.7	1.6
Warren	...	...	...	...	...
White	7.0	...	4.3	...	2.0
All counties	473.4	29.2	11.0	123.4	159.7
					148.1

Table 30—*Volume of hardwood growing stock in the saw-logportion of sawtimber trees on timberland by forest type, Plateau Counties, Tennessee, 1989*

County	Total	Forest type group			
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory
		Planted	Natural		
<i>Million cubic feet</i>					
Bledsoe	48.3	...	...	0.8	5.5
Campbell	186.7	...	...	2.6	8.4
Cumberland	142.7	3.0	...	2.4	19.4
Fentress	107.6	...	...	2.4	12.4
Franklin	93.2	...	...	...	92.9
Grundy	69.6	...	...	1.9	2.3
Marion	118.1	...	...	...	9.3
Morgan	160.0	...	...	...	34.1
Overton	155.1	...	...	2.0	6.7
Pickett	44.3	...	...	...	44.3
Putnam	106.4	...	...	...	3.0
Scott	188.8	3.1	...	1.7	8.9
Sequatchie	36.2	...	...	4.5	...
Van Buren	57.2	3.2	...	0.7	0.9
Warren	63.4	...	...	...	0.4
White	105.5	...	0.7	...	1.9
All counties	1683.4	9.4	0.7	19.0	113.9
					1532.1
					8.2

Table 31—Volume of timber on timberland by county, class of timber and species group, Plateau Counties, Tennessee, 1989

County	All classes	Growing stock		Rough		Rotten	
		Softwood	Hardwood	softwood	Hardwood	softwood	Hardwood
<i>Million cubic feet</i>							
Bledsoe	200.1	70.0	117.6	,	10.3	...	2.3
Campbell	385.1	56.4	297.6	0.7	20.9	...	9.5
Cumberland	446.6	123.1	295.2	2.9	18.9	...	6.4
Fentress	381.1	128.4	235.1	0.4	13.4	0.3	3.4
Franklin	203.5	4.4	171.4	0.6	15.0	0.1	12.0
Grundy	223.1	31.9	162.5	0.7	13.0	0.4	14.6
Marion	303.8	41.1	224.3	0.5	26.9	...	10.9
Morgan	393.9	89.5	279.2	...	17.3	0.2	7.7
Overton	305.8	31.5	259.9	0.6	12.0	...	1.9
Pickett	100.8	7.0	85.9	0.3	4.5	...	3.1
Putnam	219.6	18.9	183.9	0.3	13.4	...	3.2
Scott	524.1	107.1	383.1	0.6	19.5	...	13.9
Sequatchie	148.2	54.1	80.3	0.8	10.5	...	2.6
Van Buren	160.1	42.2	107.5	...	8.7	...	1.7
Warren	134.0	...	111.6	0.5	18.3	...	3.6
White	206.0	26.0	172.3	...	5.2	...	2.4
All counties	4335.7	831.4	3167.4	8.8	227.8	1.1	99.3

Table 32-Number of live trees on timberland by detailed species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
Thousand trees													
Shortleaf pine	24514	3701	2666	4360	5961	3989	2607	874	250	87	11	9	...
Loblolly pine	48674	6174	17298	15924	6729	1729	489	21.5	17	2.5	44	30	...
Virginia pine	100543	38413	28444	16023	11894	6341	4307	2174	633	223	69	24	...
Pitch pine	559	534	...	...	...	...	25	...	...	...	...	...	...
E. white pine	24103	15979	4186	827	1015	607	510	368	216	115	127	134	19
Redcedar	20421	103%	5051	3026	741	835	254	105	13	...	...	...	...
Hemlock-spruce	22624	13838	4346	1904	555	528	401	406	231	234	67	115	...
Total softwoods	241438	89033	53989	42064	26894	14029	8595	4140	1360	684	318	312	19
Select white oaks	197761	84661	56666	23342	11501	8.530	5115	3533	2029	1259	617	494	14
Select red oaks	14542	4233	2052	1724	1721	1268	916	836	697	402	366	299	27
Other white oaks	74726	22756	14852	10359	9 0 4 4	6185	4722	3050	1766	877	507	497	110
Other red oaks	100946	32810	22469	15446	10063	6103	5209	3644	2490	1400	732	574	7
Other hickories	130926	70105	27762	9104	8686	6583	4189	2222	1159	601	281	212	21
Persimmon	3903	2726	534	271	177	170	2.5	...	...	...	...	...	...
Hard maple	81126	46678	20194	5075	3750	2267	1390	652	461	241	199	176	42
Soft maple	314994	234881	47286	14899	8338	3726	2647	1366	866	509	275	202	...
Boxelder	1134	1058	...	...	76	...	...	...	...	...	...	...	...
Beech	17672	11437	1546	1289	967	678	401	254	188	307	122	410	72
Sweetgum	13178	5917	3091	1786	1156	543	333	160	122	12	31	25	3
Blackgum	108878	80225	19645	3794	1925	1176	634	621	459	193	124	73	9
White ash	24047	12828	5218	2459	1492	834	468	367	195	76	30	79	...
Other ashes	10156	5352	1978	1865	132	385	193	94	78	37	19	22	...
Sycamore	574	...	...	157	114	111	54	61	43	14	12	8	...
Basswood	9406	7494	...	222	579	360	281	80	189	126	52	22	...
Yellow-poplar	75363	35329	10969	7525	5956	4941	3646	2969	1685	1190	609	4%	47
Magnolia	2605	1648	...	98	268	324	...	90	115	14	40	8	...
Willow	1502	1502	...	...	...	...	...	...	...	...	...	...	...
Black walnut	774	...	...	...	239	127	193	161	14	28	...	8	4
Black cherry	17252	11958	2044	1037	978	529	298	18.5	130	50	30	13	...
American elm	3571	2545	627	128	78	66	80	23	...	...	9	15	...
Other elms	15954	11916	2550	871	331	80	61	93	33	...	9	9	...
River birch	4527	549	3611	101	204	...	24	21	...	...	...	16	...
Other birches	12335	7950	2194	1710	341	75	...	34	17	14	...	...	...
Hackberry	655	516	...	...	60	80	...	...	...	...	...	...	...
Black locust	22517	12704	6826	998	794	582	303	172	46	73	19	...	...
Other locusts	534	534	...	...	...	...	...	...	...	...	...	...	...
Sassafras	48184	35956	8080	1780	1130	547	438	102	46	47	45	13	...
Dogwood	231234	189113	37096	4583	417	...	26	...	...	...	...	...	...
Holly	22885	19603	2659	498	76	49	...	...	...	...	...	...	...
Other commercial	3643	1549	524	331	517	219	193	147	58	53	29	22	...
Total hardwoods	1567503	956533	300474	111452	71110	46538	31838	20939	12885	7524	4159	3692	358
Noncommercial	244985	167857	56097	16015	3321	1088	404	147	30	13	12	...	...
All species	2053926	1213424	410561	169531	101325	61654	40837	25226	1427.5	8221	4490	4004	377

Table 33—Number of growing-stock trees on timberland by detailed species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)									
		5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>Thousand trees</i>											
Shortleaf pine	18016	4360	5830	3989	2607	874	250	87	11	9	...
Loblolly pine	25082	15924	6655	1682	489	215	17	2s	44	30	...
Virginia pine	41222	16023	11688	6217	4279	2132	616	17s	69	24	...
Pitch pine	2s	...			2s	...	...	...	...	...	...
E. white pine	3911	827	101s	607	483	368	216	115	127	134	19
Redcedar	4887	2407	555	482	226	406	214	...	...	...	...
Hemlock-spruce									67	110	...
Total softwoods	96668	4141s	26483	13598	848.5	4080	1326	635	318	307	19
Select white oaks	51794	20626	11169	8158	4664	331s	1901	107s	508	37s	5
Select red oaks	7606	1516	1589	1114	883	793	680	402	347	257	2.5
Otherwhite oaks	33022	9488	8483	5601	407s	2473	1480	697	365	331	30
Other red oaks	42130	14560	9382	5745	46.54	3272	2227	1209	624	457	...
Other hickories	30680	8086	8093	6432	3902	2060	1095	525	271	195	21
Persimmon	643	271	177	170	2s	...	...	...	...	...	...
Hard maple	12060	3914	3261	2132	1259	542	429	229	199	92	4
Soft maple	26182	12141	6985	2820	2010	1084	516	340	174	113	...
Boxelder	76	...	76	...	...	...	...	...	...	...	...
Beech	3391	788	804	540	248	216	156	243	94	266	3s
Sweetgum	3771	1606	1096	432	307	160	109	12	31	17	3
Blackgum	7429	3277	1726	878	525	458	350	143	31	37	4
White ash	5021	2006	1263	79s	365	290	180	64	19	40	...
Other ashes	2442	1640	132	351	107	76	78	23	19	14	...
Sycamore	311	...	114	7s	23	39	27	14	12	8	...
Basswood	1573	84	579	292	281	80	173	37	32	1.5	...
Yellow-poplar	28111	7001	5883	4777	3564	2949	1665	1166	599	481	2s
Magnolia	923	98	268	324	...	90	82	14	40	8	...
Black walnut	733	...	239	127	169	143	14	28	...	8	4
Black cherry	2883	910	896	49s	218	168	112	50	21	13	...
American elm	250	128	...	33	52	23	...	...	...	15	...
Other elms	1102	590	263	80	33	93	33	...	9	...	...
River birch	345	101	204	...	24	...	...	...	...	16	...
Other birches	1730	1392	264	41	...	34	...	...	...	...	...
Hackberry	140	...	60	80	...	...	...	...	...	...	...
Black locust	1987	565	599	393	217	154	15	34	10	...	...
Sassafras	2909	1246	820	302	364	83	46	24	10	13	...
Dogwood	2195	2095	7s	...	26	...	...	...	...	...	...
Holly	492	368	76	49	...	...	...	...	...	...	...
Other commercial	1187	212	372	173	16.5	129	58	53	19	6	...
Total hardwoods	273119	94709	64946	42407	28158	18725	11426	6381	343s	2776	157
All species	369787	136124	91429	56005	36643	22805	12752	7016	3753	3083	176

Table 34-Volume of growing-stock trees on timberland by detailed species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)									
		5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
<i>Million cubic feet</i>											
Shortleaf pine	200.2	12.8	42.1	53.6	51.1	25.4	9.5	4.4	0.8	0.6	...
Loblolly pine	86.7	28.1	29.6	13.4	5.8	4.7	0.3	0.9	2.2	1.7	...
Virginia pine	392.4	53.2	85.0	79.5	81.0	57.5	22.8	7.6	4.4	1.4	...
Pitch pine	0.6	...	...	...	0.6	...	...	...	...	...	...
E. white pine	72.0	2.0	6.3	7.4	9.0	9.3	7.2	5.7	7.8	13.6	3.7
Redcedar	20.8	6.1	4.1	5.7	3.2	1.5	0.2	...	...	...	...
Hemlock-spruce	58.7	3.9	2.8	5.0	7.1	10.0	7.5	9.7	4.0	8.6	...
Total softwoods	831.4	106.1	170.0	164.7	157.7	108.3	47.5	28.4	19.1	25.9	3.7
Select white oaks	545.4	56.9	70.0	93.3	85.3	81.2	64.5	45.1	25.7	22.6	0.6
Select red oaks	148.7	5.0	10.1	12.6	15.4	20.8	23.2	17.7	19.7	20.6	3.6
Other white oaks	361.7	25.3	46.0	57.2	66.3	54.5	45.6	27.5	17.1	20.0	2.1
Other red oaks	478.5	36.7	53.6	58.2	73.9	75.1	69.2	49.7	31.9	30.0	...
Other hickories	376.9	21.9	46.5	73.4	76.3	54.5	41.5	26.4	16.4	17.0	3.1
Persimmon	3.5	0.3	1.0	1.7	0.4	...	...	...	...	...	...
Hard maple	148.2	11.1	22.7	26.9	23.5	15.6	16.1	12.1	11.8	7.9	0.6
Soft maple	210.4	34.6	42.0	32.3	32.8	23.9	15.6	12.8	9.4	6.9	...
Boxelder	0.2	...	0.2	...	...	...	...	...	...	...	...
Beech	70.3	2.5	5.6	6.2	3.6	5.6	4.9	10.0	4.4	23.2	4.2
Sweetgum	31.2	2.9	5.4	5.2	5.8	3.4	4.2	0.6	1.7	1.2	0.6
Blackgum	56.7	6.6	8.8	7.7	7.0	9.0	8.8	4.6	1.6	2.2	0.3
White ash	49.0	4.8	7.9	9.0	6.8	7.1	5.7	3.0	0.8	3.9	...
Other ashes	20.2	4.2	0.4	4.2	2.2	2.2	3.3	1.6	1.4	0.7	...
Sycamore	5.9	...	1.0	0.8	0.1	1.2	1.3	0.4	0.7	0.4	...
Basswood	30.6	0.4	4.9	4.4	6.7	2.5	6.6	2.1	1.6	1.4	...
Yellow-poplar	488.6	21.8	40.5	57.8	71.7	87.2	67.0	59.8	36.3	42.9	3.6
Magnolia	17.1	0.5	2.0	4.1	...	3.4	2.9	0.8	3.0	0.6	...
Black walnut	11.9	...	1.4	1.3	2.7	3.9	0.5	1.1	...	0.5	0.5
Black cherry	27.9	2.4	5.3	4.8	3.1	4.6	3.6	2.1	1.2	0.7	...
American elm	3.3	0.2	...	0.4	1.1	0.7	...	...	...	0.9	...
Other elms	9.0	1.9	1.5	0.8	0.6	2.7	0.9	...	0.6	...	...
River birch	2.9	0.2	1.2	...	0.4	...	...	...	...	1.0	...
Other birches	6.1	3.3	1.3	0.6	...	0.9	...	...	...	...	...
Hackberry	1.1	...	0.3	0.8	...	...	...	...	...	...	...
Black locust	18.2	1.8	3.0	4.0	3.4	3.6	0.5	1.4	0.4	...	...
Sassafras	21.7	2.6	4.6	3.3	6.1	1.6	1.4	0.8	0.7	0.6	...
Dogwood	4.7	4.0	0.3	...	0.5	...	...	...	...	...	...
Holly	1.3	0.7	0.2	0.3	...	...	...	...	...	...	...
Other commercial	16.2	0.5	2.2	2.0	3.1	2.9	1.7	2.0	1.1	0.7	...
Total hardwoods	3167.4	253.2	390.1	473.4	499.0	468.3	389.0	281.5	187.6	206.0	19.3
All species	3998.8	359.3	560.1	638.1	656.7	576.6	436.5	309.9	206.7	231.9	23.0

Table 35—Volume of growing stock in the saw-log portion of sawtimber trees on timberland by detailed species and diameter class, Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>Million cubic feet</i>									
Shortleaf pine	125.3	43.6	45.2	22.9	8.5	3.8	0.7	0.5	...
Loblolly pine	23.3	9.7	4.8	4.1	0.3	0.9	2.0	1.5	...
Virginia pine	213.7	63.4	68.2	50.5	20.0	6.6	3.8	1.2	...
Pitch pine	0.6	...	0.6	...	...	...	...	...	...
E. white pine	55.5	5.9	7.9	8.2	6.6	4.9	6.6	11.7	3.7
Redcedar	8.9	4.6	2.8	1.3	0.2	...	...	...	...
Hemlock-spruce	46.2	4.0	6.1	8.7	6.7	9.1	3.7	7.9	...
Total softwoods	473.4	131.1	135.6	95.7	42.2	25.3	16.8	22.9	3.7
Select white oaks	264.8	...	64.3	66.8	53.9	385	22.0	18.7	0.5
Select red oaks	101.1	...	11.7	17.0	19.3	15.1	17.0	17.7	3.4
Other white oaks	188.8	...	50.6	44.3	38.2	23.4	13.8	16.7	1.7
Other red oaks	274.1	...	56.7	62.5	59.2	42.7	27.3	25.8	...
Other hickories	193.5	...	58.2	45.9	355	22.7	13.9	14.3	3.0
Persimmon	0.3	...	0.3	...	...	...	...	...	...
Hard maple	69.9	...	17.0	12.7	13.1	10.0	10.0	6.7	0.5
Soft maple	79.1	...	23.3	18.3	13.0	10.8	8.2	5.5	...
Beech	45.3	...	2.5	4.4	3.8	8.5	3.8	18.9	3.3
Sweetgum	13.5	...	3.8	2.6	3.6	0.6	1.5	1.1	0.4
Blackgum	28.6	...	5.5	7.6	7.8	4.1	1.5	2.0	0.3
White ash	21.5	...	5.1	5.6	4.3	2.6	0.6	3.4	...
Other ashes	9.3	...	1.5	1.6	2.8	1.5	1.3	0.6	...
Sycamore	3.2	...	...	0.9	1.0	0.3	0.6	0.4	...
Basswood	17.3	...	5.3	2.0	5.5	1.7	1.5	1.3	...
Yellow-poplar	312.3	...	52.0	72.4	59.4	53.7	32.6	38.9	3.3
Magnolia	8.9	...	...	2.8	2.3	0.7	2.5	0.5	...
Black walnut	6.7	...	1.7	3.2	0.3	0.8	...	0.3	0.5
Black cherry	11.9	...	2.2	3.6	2.6	1.6	1.2	0.7	...
American elm	1.8	...	0.9	0.3	...	...	...	0.6	...
Other elms	4.0	...	0.5	2.2	0.8	...	0.5	...	...
River birch	1.3	...	0.3	...	...	...	...	0.9	...
Other birches	0.8	...	...	0.8	...	...	...	...	...
Black locust	7.4	...	2.6	2.9	0.4	1.2	0.3	...	...
Sassafras	8.0	...	3.8	1.3	1.2	0.7	0.5	0.6	...
Dogwood	0.3	...	0.3	...	...	...	...	...	...
Other commercial	9.6	...	2.6	2.3	1.6	1.6	1.0	0.5	...
Total hardwoods	1683.4	...	372.6	384.0	3295	242.9	161.5	176.0	16.9
All species	2156.8	131.1	508.2	479.7	371.7	268.2	178.3	198.9	20.6

Table 36—*Volume of timber on timberland by species and class of timber,
Plateau Counties, Tennessee, 1989*

Species	All live	Growing stock	Rough	Rotten
<i>Million cubic feet</i>				
Shortleaf pine	201.2	200.2	1.0	...
Loblolly pine	87.2	86.7	0.5	...
Virginia pine	396.6	392.4	3.8	0.4
Pitch pine	0.6	0.6	...	...
E. white pine	72.0	72.0	...	...
Redcedar	23.8	20.8	2.8	0.1
Hemlock-spruce	59.9	58.7	0.7	0.5
Total softwoods	841.3	831.4	8.8	1.1
Select white oaks	5 7 6 . 0	545.4	22.2	8.5
Select red oaks	154.3	148.7	3.9	1.7
Other white oaks	402.5	361.7	29.0	11.8
Other red oaks	512.1	478.5	19.8	13.8
Other hickories	392.1	376.9	11.5	3.7
Persimmon	3.5	3.5	...	...
Hard maple	167.7	148.2	8.6	10.9
Soft maple	250.3	210.4	26.6	13.4
Boxelder	0.2	0.2	...	...
Beech	87.9	70.3	6.1	11.5
Sweetgum	33.3	31.2	1.9	0.2
Blackgum	68.8	56.7	4.7	7.4
White ash	55.9	49.0	4.3	2.6
Other ashes	22.6	20.2	2.4	...
Sycamore	6.9	5.9	1.1	...
Basswood	35.2	36.6	1.2	3.4
Yellow-poplar	495.8	488.6	4.2	3.0
Magnolia	17.9	17.1	...	0.7
Black walnut	12.3	11.9	...	0.3
Black cherry	36.9	27.9	2.6	0.3
American elm	4.4	3.3	0.7	0.5
Other elms	10.1	9.0	1.1	...
River birch	3.0	2.9	0.1	...
Other birches	7.3	6.1	0.7	0.5
Hackberry	1.1	1.1	...	...
Black locust	23.2	18.2	2.6	2.4
Sassafras	26.4	21.7	3.2	1.5
Dogwood	8.8	4.7	3.9	0.2
Holly	1.6	1.3	0.3	...
Other commercial	19.0	16.2	1.8	1.1
Total hardwoods	3431.1	3167.4	164.4	99.3
Noncommercial	63.3	...	63.3	...
All species	4335.7	3998.8	236.6	100.3

Table 37-*Volume of sawtimber for tree grade 1 on timberland by detailed species and diameter class, Plateau Counties, Tennessee, 1989*

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>- - - - - Million board feet - - - - -</i>									
Shortleaf pine	266.9	78.9	90.1	57.5	14.7	17.8	5.1	2.8	...
Loblolly pine	1.2	...	1.2	...	...	...	...	...	...
Virginia pine	12.2	2.6	6.9	2.7	...	...	...	...	...
E. white pine	80.3	...	...	7.2	...	3.7	6.2	42.5	20.9
Redcedar	41.0	22.5	12.0	65	...	...	...	...	...
Hemlock-spruce	12.9	...	...	...	...	...	4.2	8.7	...
Total softwoods	414.7	104.1	110.2	73.9	14.7	21.5	15.5	54.0	20.9
Select white oaks	99.2	...	...	...	22.9	38.9	21.6	15.9	...
Select red oaks	98.0	...	...	...	9.6	22.6	23.5	38.7	3.6
Other white oaks	83.1	...	...	...	38.2	24.6	14.0	6.2	...
Other red oaks	108.8	...	...	...	11.8	40.1	15.9	41.0	...
Other hickories	91.6	...	...	...	15.4	30.4	12.7	24.9	8.2
Hard maple	13.1	...	...	...	...	2.5	10.6	...	...
Soft maple	12.4	...	...	...	1.4	...	3.2	7.8	...
Sweetgum	3.9	...	...	...	3.9	...	...	...	...
Blackgum	1.4	...	...	...	...	...	...	...	1.4
White ash	23.6	...	...	...	5.2	3.9	...	14.6	...
Other ashes	2.0	...	...	...	2.0	...	...	...	...
Sycamore	3.1	...	...	...	...	...	3.1	...	...
Basswood	18.0	...	...	...	8.9	4.5	...	4.6	...
Yellow-poplar	248.5	...	...	...	47.1	69.8	36.0	92.3	3.2
Black walnut	2.0	...	...	...	...	...	...	2.0	...
Black cherry	11.4	...	...	...	4.6	6.8	...	...	...
Black locust	3.3	...	...	...	...	1.3	2.0	...	...
Sassafras	1.6	...	...	...	...	...	...	1.6	...
Other commercial	10.6	...	...	...	1.9	3.4	1.9	3.4	...
Total hardwoods	835.4	...	...	...	172.9	248.7	144.5	253.0	16.4
All species	1250.1	104.1	110.2	73.9	187.6	270.2	160.0	307.0	37.2

Table 38—Volume of sawtimber for tree grade 2 on timberland by detailed species and diameter class,
Plateau Counties, Tennessee, 1989

Species	All classes	Diameter class (inches at breast height)						
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9
----- Million board feet -----								
Shortleaf pine	175.4	55.8	72.0	27.0	17.0	3.6	...	...
Virginia pine	37.4	4.2	13.0	12.6	2.7	2.3	...	2.6
Pitch pine	3.7	...	3.7	...	...	...	...	...
E. white pine	149.3	15.5	15.2	14.2	21.6	25.6	28.6	28.5
Hemlock-spruce	18.7	...	1.8	3.1	7.2	...	...	6.6
Total softwoods	384.5	75.6	105.7	56.9	48.4	31.5	28.6	37.7
Select white oaks	317.4	...	...	76.7	89.1	80.9	36.6	34.2
Select red oaks	157.5	...	...	30.1	35.8	26.8	31.3	33.5
Other white oaks	164.8	...	...	46.8	41.3	17.9	25.0	33.7
Other red oaks	235.6	...	...	43.6	55.5	48.1	41.6	46.8
Other hickories	226.8	...	...	51.0	65.2	48.2	36.5	21.1
Hard maple	76.5	...	...	21.2	19.2	12.9	12.5	10.7
Soft maple	39.9	...	...	11.1	9.1	5.1	14.5	...
Beech	12.4	...	...	2.6	2.7	2.3	2.0	2.9
Sweetgum	15.7	...	...	2.7	3.6	3.4	...	6.0
Blackgum	28.4	...	...	8.8	14.4	2.4	2.8	...
White ash	36.0	...	...	16.8	7.4	5.9	...	5.9
Other ashes	15.7	...	...	7.8	...	...	5.1	2.8
Sycamore	5.5	...	...	5.5	...	...	...	...
Basswood	22.3	...	...	3.8	14.1	...	4.4	...
Yellow-poplar	359.3	...	...	72.6	109.6	85.3	41.7	50.1
Magnolia	7.1	...	...	...	...	...	4.1	3.0
Black walnut	1.6	...	...	...	1.6	...	...	...
Black cherry	15.0	...	...	7.9	5.2	1.9	...	...
Other elms	2.6	...	...	2.6	...	...	...	...
River birch	6.0	...	...	...	...	...	...	6.0
Other birches	3.1	...	...	3.1	...	...	...	...
Sassafras	6.3	...	...	4.8	1.5	...	...	...
Other commercial	3.5	...	...	3.5	...	...	...	...
Total hardwoods	1759.0	...	...	423.1	475.2	341.1	258.1	256.8
All species	2143.5	75.6	105.7	480.0	523.6	372.6	286.7	294.5
								4.8

Table 39—*Volume of sawtimber for tree grade 3 on timberland by detailed species and diameter class, Plateau Counties, Tennessee, 1989*

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	X.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>- - - - - Million board feet - - - - -</i>									
Shortleaf pine	296.0	106.8	103.2	59.0	21.8	5.1	...	...	...
Loblolly pine	113.5	44.7	22.2	22.5	1.5	4.8	11.4	6.5	...
Virginia pine	1140.4	325.9	358.7	279.4	114.1	34.8	245	3.2	...
E. white pine	87.4	15.5	23.8	23.4	13.3	2.7	2.8	5.9	...
Hemlock-spruce	221.9	19.9	31.7	45.8	32.5	49.6	17.6	24.9	...
Total softwoods	1859.2	512.8	539.6	430.0	183.2	96.9	56.3	40.5	...
Select white oaks	709.3	...	2445	204.9	116.6	84.7	26.1	29.2	3.3
Select red oaks	220.5	...	46.5	45.5	41.2	20.7	40.3	23.3	2.8
Other white oaks	552.2	...	210.4	144.0	92.5	64.8	20.2	14.9	5.3
Other red oaks	600.2	...	158.4	149.3	121.3	72.3	60.6	38.4	...
Other hickories	603.1	...	274.4	163.4	91.8	37.3	16.6	19.7	...
Persimmon	1.8	...	1.8	...	...	...	...	...	...
Hard maple	204.7	...	58.5	30.6	39.4	33.7	29.9	12.6	..
Soft maple	235.3	...	82.3	54.4	41.7	31.8	12.4	12.7	...
Beech	85.4	...	6.9	9.2	5.1	16.9	...	34.9	12.3
Sweetgum	44.3	...	20.1	6.8	10.8	...	3.8	...	2.7
Blackgum	71.9	...	24.1	20.4	16.0	5.0	3.9	2.5	...
White ash	52.0	...	29.2	5.4	9.3	6.8	1.3	...	...
Other ashes	38.6	...	8.8	1.5	15.0	10.0	3.3	...	...
Sycamore	5.9	...	...	...	5.9	...	...	...	...
Basswood	54.5	...	29.0	6.4	8.7	6.9	...	3.4	...
Yellow-poplar	806.3	...	228.2	261.1	116.8	108.7	38.9	49.9	2.7
Magnolia	30.8	...	...	11.3	7.1	...	12.4	...	...
Black walnut	31.7	...	7.9	20.5	...	3.3	...	...	...
Black cherry	19.2	...	7.4	9.2	2.7	...	...	...	...
American elm	5.4	...	2.5	1.9	...	...	...	1.1	...
Other elms	8.8	...	2.8	6.0	...	...	...	...	...
River birch	2.0	...	2.0	...	...	...	...	...	...
Other birches	1.1	...	...	1.1	...	...	...	...	...
Black locust	15.1	...	7.9	3.7	...	3.5	...	...	...
Sassafras	26.9	...	16.0	2.4	3.4	2.0	3.1	...	...
Dogwood	1.5	...	1.5	...	...	...	...	...	...
Other commercial	21.7	...	7.4	3.8	3.5	2.3	4.6	...	...
Total hardwoods	4450.1	...	1478.1	1163.1	748.7	510.9	277.6	242.6	29.2
All species	6309.3	512.8	2017.6	1593.1	931.9	607.8	333.9	283.1	29.2

Table 40—Volume of sawtimber for tree grade 4 on timberland by detailed species and diameter class, Tennessee's Plateau Counties, 1989

Species	All classes	Diameter class (inches at breast height)						
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9
Million board feet								
E. white pine	6.7	...	2.6	1.3	...	...	2.9	...
Total softwoods	6.7	...	2.6	1.3	...	...	2.9	...
Select white oaks	378.2	...	100.0	91.2	95.5	29.8	48.0	13.8
Select red oaks	104.5	...	15.9	25.6	25.0	20.5	11.5	3.7
Other white oaks	238.5	...	68.6	54.4	45.3	29.5	15.1	21.9
Other red oaks	618.4	...	146.6	158.5	147.6	89.9	45.8	30.0
Other hickories	204.8	...	53.4	59.1	34.6	29.1	10.5	18.1
Hard maple	96.4	...	35.1	20.0	14.8	4.5	8.5	13.5
Soft maple	107.4	...	33.7	22.9	19.1	12.4	16.2	3.0
Beech	133.7	...	4.9	13.4	14.4	25.6	22.4	53.0
Sweetgum	5.8	...	2.8	3.1	...	...	...	...
Blackgum	24.6	...	1.5	9.6	7.3	3.1	...	3.0
White ash	9.8	...	3.4	6.3	...	...	...	...
Sycamore	1.8	...	...	...	...	1.8	...	...
Basswood	5.9	...	3.9	...	...	...	2.0	...
Yellow-poplar	358.6	...	67.3	86.8	75.1	56.6	37.3	24.4
Magnolia	7.4	...	...	7.4	...	...	...	...
Black walnut	1.3	...	1.3	...	...	...	...	...
Black cherry	12.4	...	...	4.0	2.6	1.6	4.3	...
American elm	2.7	...	2.7	...	...	...	...	...
Other elms	10.2	...	...	5.1	2.1	...	3.0	...
Black locust	19.6	...	5.0	12.1	2.5	...	...	...
Sassafras	3.0	...	1.0	...	...	...	...	1.9
Other commercial	17.0	...	7.6	4.7	1.9	2.8	...	...
Total hardwoods	2361.8	...	552.1	583.7	490.8	307.2	224.6	186.5
All species	2368.5	...	554.6	585.0	490.8	307.2	227.5	186.5
								17.0

Graphics

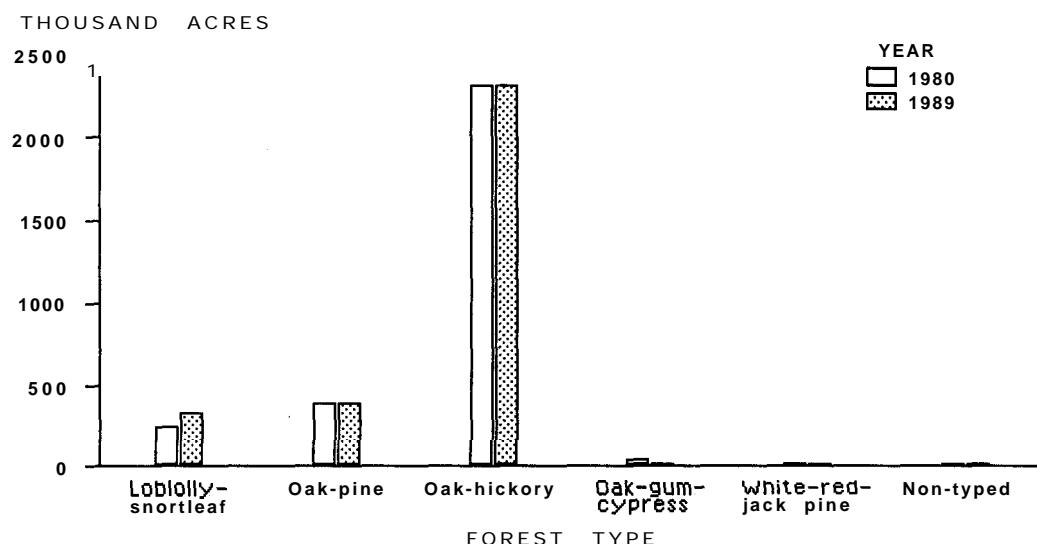


Figure 1.--Area of timberland by forest type, Plateau Counties, Tennessee, 1980 and 1989.

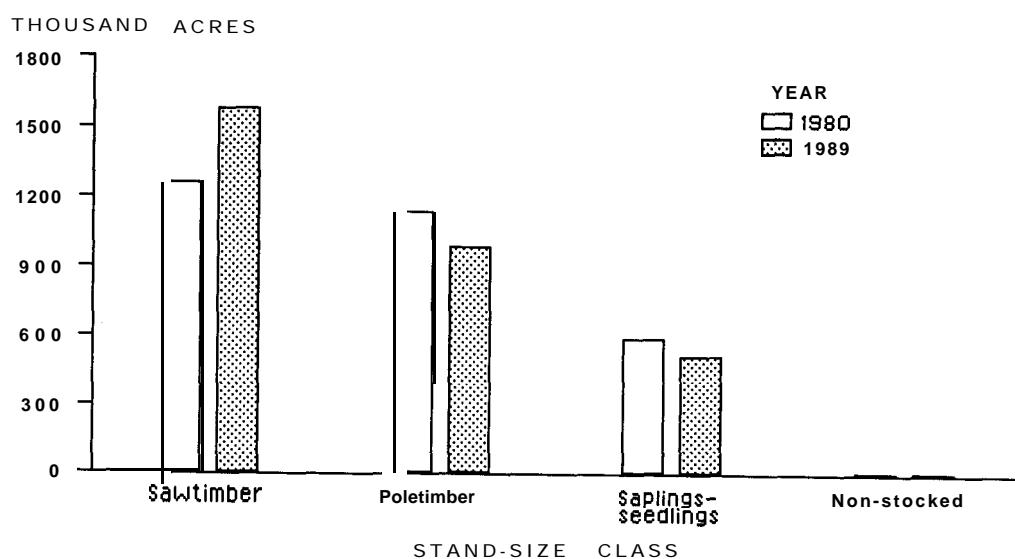


Figure 2.--Area Of timberland by stand-size class, Plateau Counties, Tennessee, 1980 and 1989.

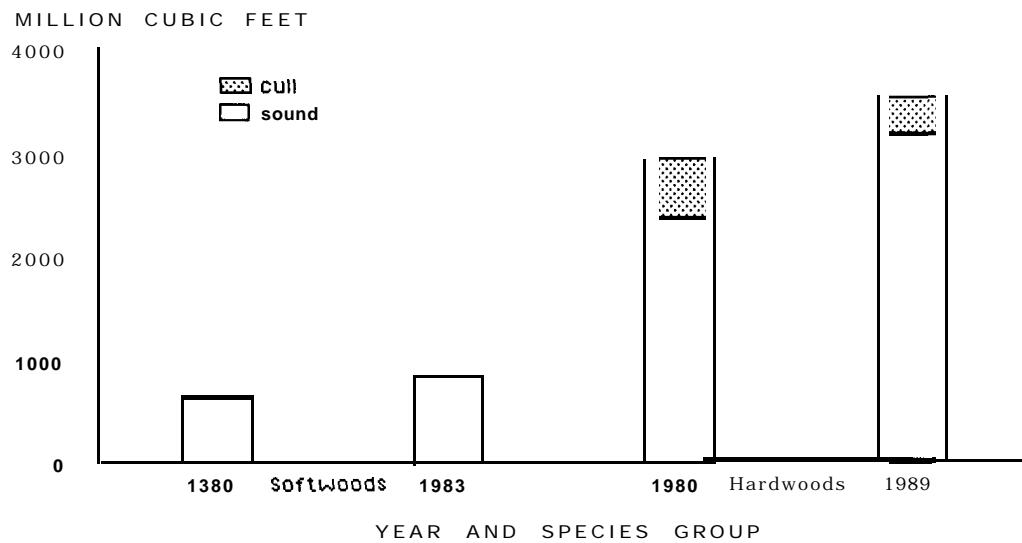


Figure 3.--Volume of timber on timberland by species group and class of timber, Plateau Counties, Tennessee, 1380 and 1989.

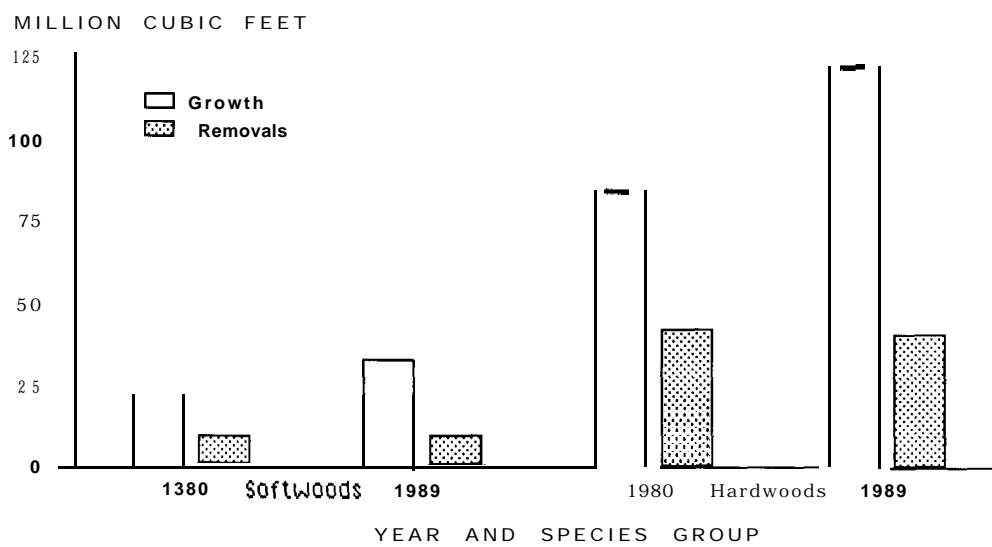


Figure 4.--Average net annual growth and average annual removals of growing stock on timberland by species group, Plateau Counties, Tennessee, 1980 and 1389.

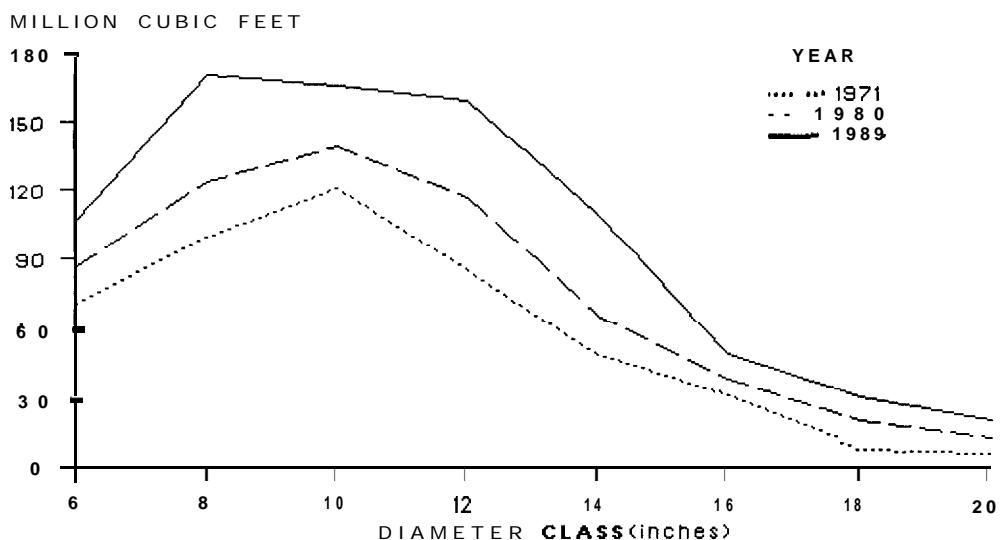


Figure 5.--Volume of Softwood growing stock on timberland by diameter class, Plateau Counties, Tennessee, 1971, 1980, and 1989.

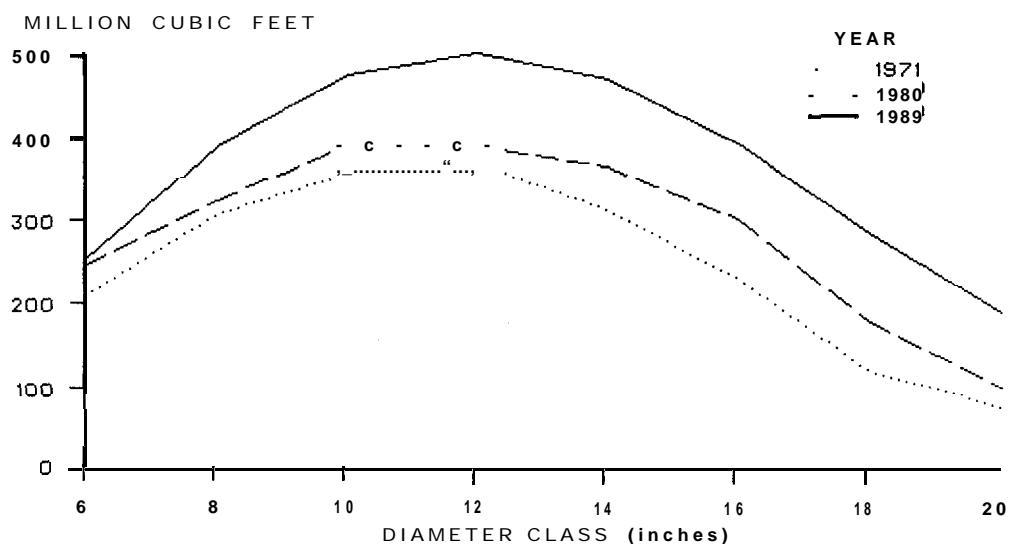


Figure 6.--Volume of hardwood growing stock on timberland by diameter class, Plateau Counties, Tennessee, 1971, 1980, and 1989.

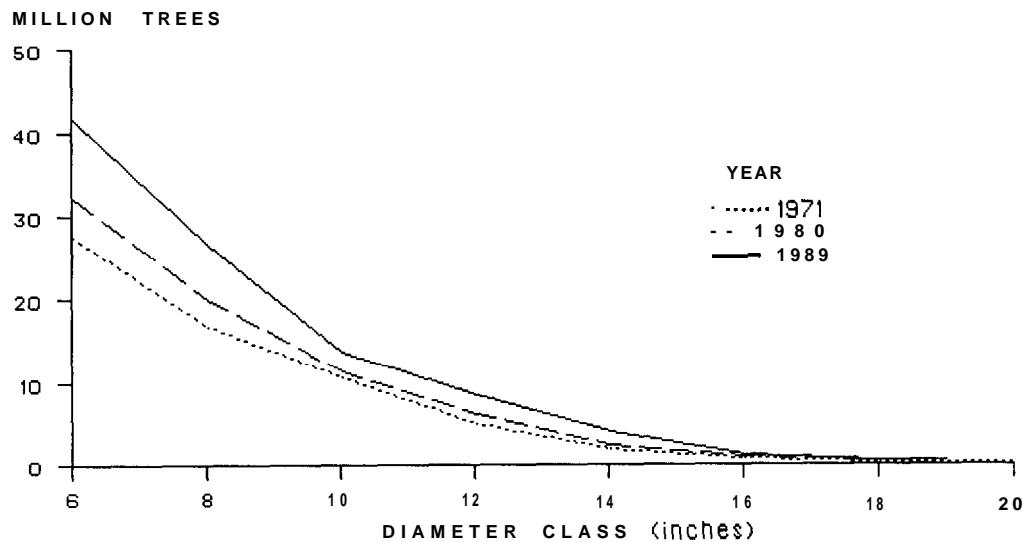


Figure 7.--Number of softwood growing-stock trees on timberland by diameter class, Plateau Counties, Tennessee, 1971, 1980, and 1989.

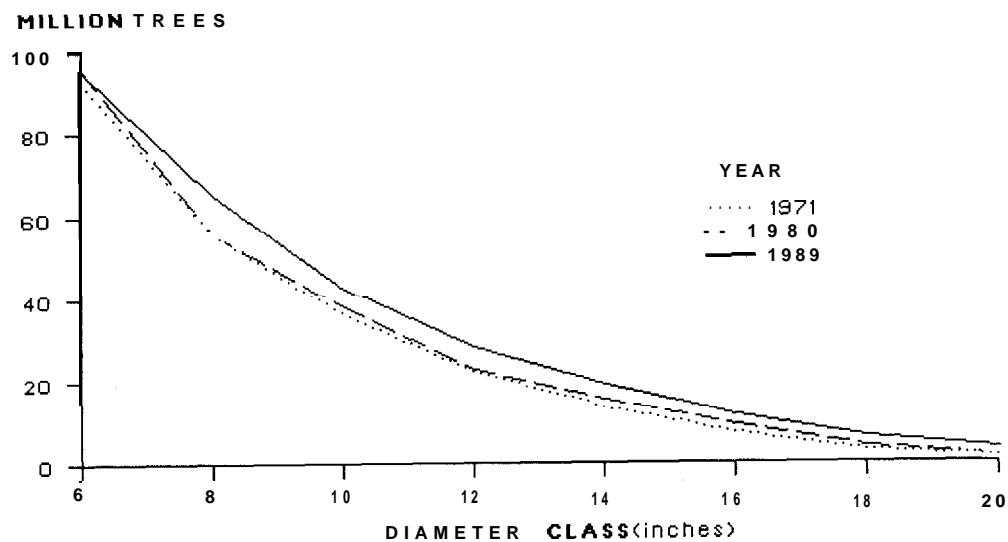
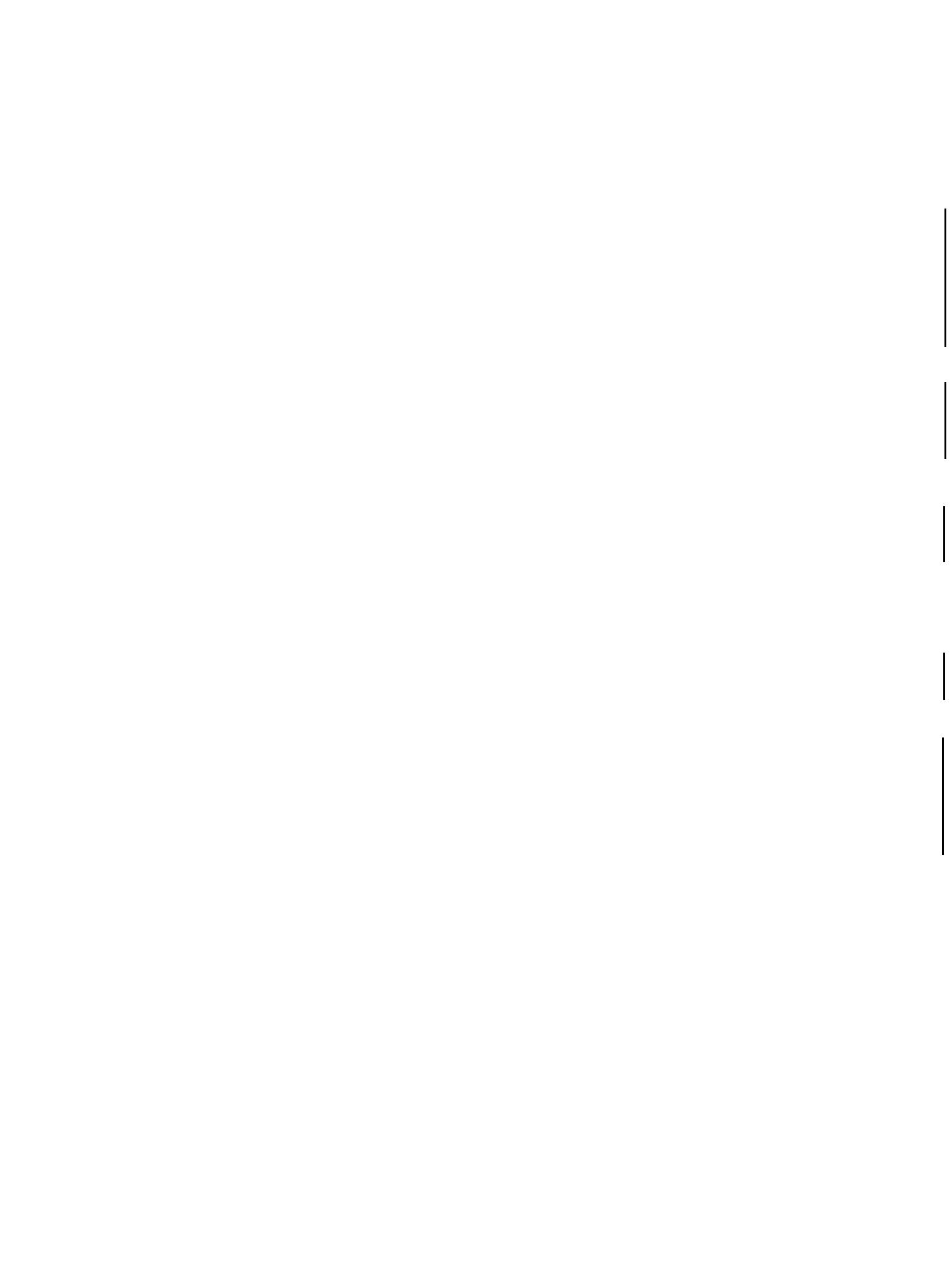


Figure 8.--Number of hardwood growing-stock trees on timberland by diameter class, Plateau Counties, Tennessee, 1971, 1980, and 1989.



Figure 9.--Percent change in the number of live trees on timberland by species group and diameter class, Plateau Counties, Tennessee, 1980 and 1383.



ACKNOWLEDGMENTS

The Southern Station gratefully acknowledges the cooperation and assistance provided by the Tennessee Division of Forestry in collecting field data. Appreciation is also expressed for the cooperation of other public agencies and other private landowners in providing access to the sample locations.

May, Dennis M.; Vissage, John S. 1989. Forest Statistics for Tennessee's Plateau Counties-1989. Resource Bull. SO- 146 . New Orleans, **LA**: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 35 p.

Tabulates forest resource information from a new inventory of the Plateau Counties of Tennessee.

Additional Keywords: Area, volume, forest type, stand size, ownership.